The Old-House 1983 YEARBOOK

A compilation of all ten 1983 issues of *The Old-House Journal* — 56 feature articles, plus book reviews, tips from readers, product sources, editors' answers to readers' questions ... and much more!





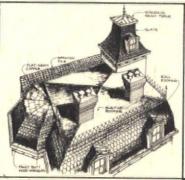
Re-Creating The 'Modern' Kitchen 1899-1930

Featuring Gas, Electricity, & No Servi

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The Popular English Revival Style

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SOME SLIDING DOORS are top hung. Earlier doors roll alor a floor track on received rollers. Both types are also reasons and the state of the state o

RET-OF-WHACK ALIGNMENT is what makes sliding doers so redious to repair. There isn't much leeway as each door soves along the metal track and into its hidden pocket.



Our Tenth Anniversary

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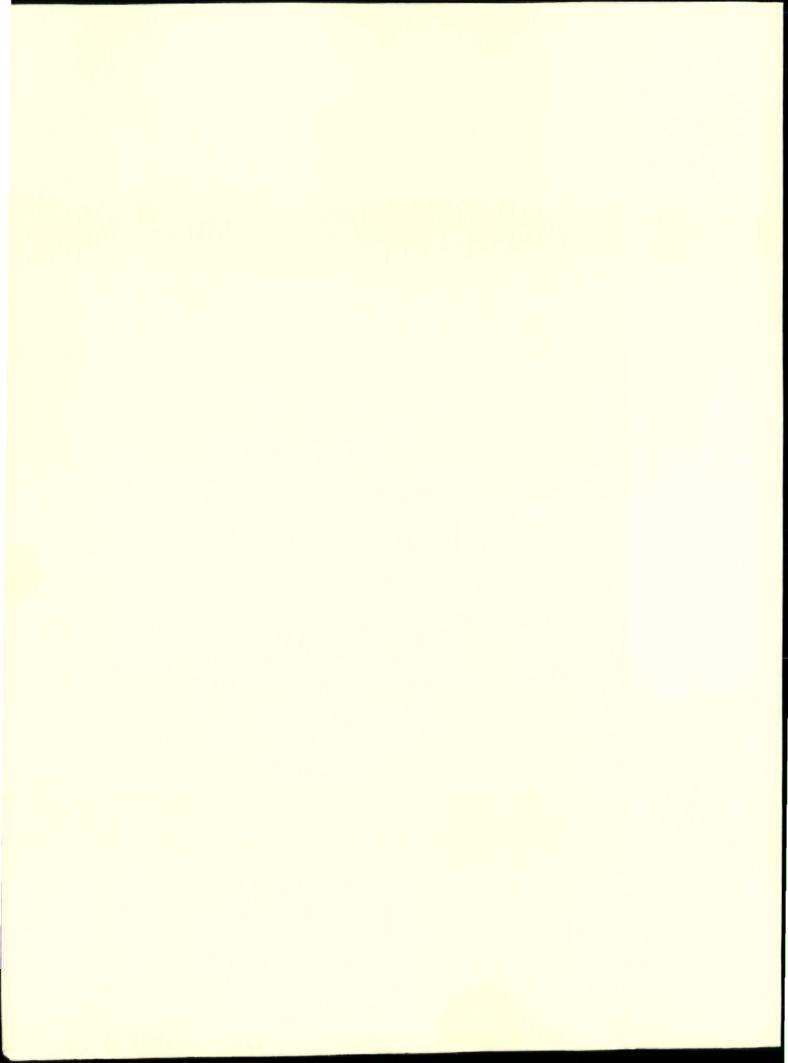


How To Repair An Old Roof

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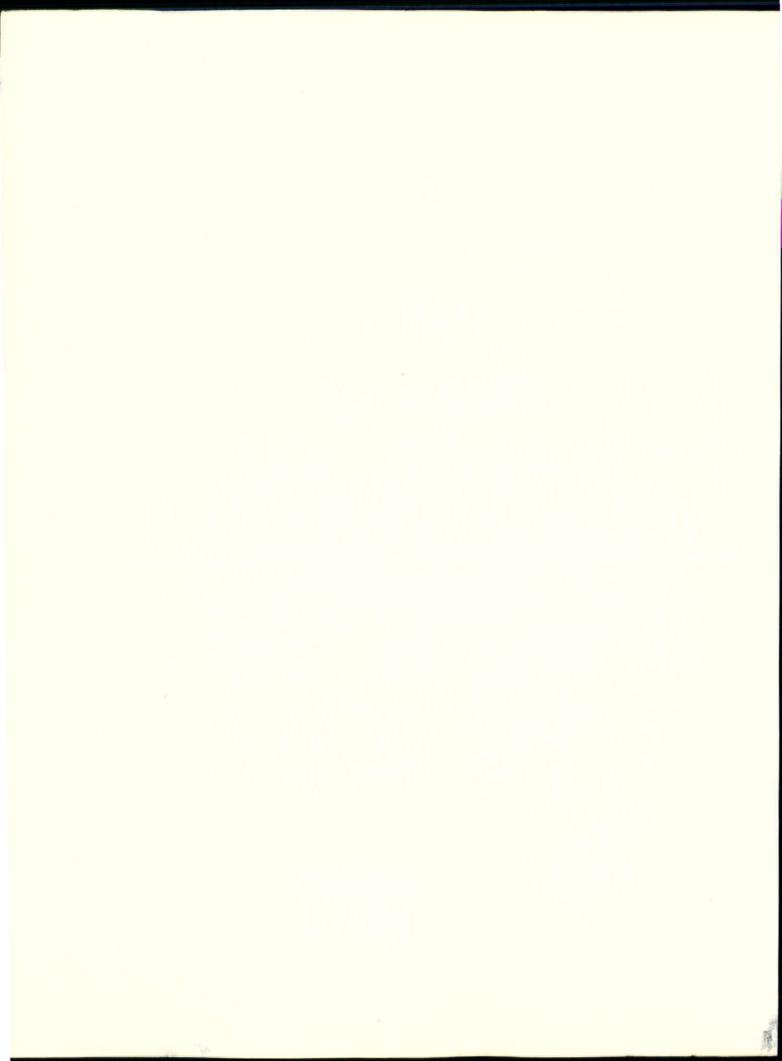
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The Old-House Journal

1983 YEARBOOK





The Old-House Journal 1983 YEARBOOK

A one-volume compilation of all the editorial pages printed in The Old-House Journal in 1983

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A Labor Of Love

hen asked to define the nature of life in an old house, we reply that it's a labor of love. Helping people accomplish this labor as practically, effectively, and enjoyably as possible has been the purpose of The Old-House Journal since our first issue in 1973. In the decade that's followed, we've worked harder than ever to perpetuate the love affair that exists between old houses and those of us who live in them and care for them.

This Yearbook contains all the editorial matter published by The Old-House Journal in 1983. In these pages, there are no specialized articles aimed solely at preservation technologists. And we're certainly not trying to turn every old house in America into a museum. We're just trying to help you revive and maintain the beauty, character, and eloquence of age which drew you to your old house in the first place.

At heart, The Journal is about preservation in the midst of a throw-away society. With each issue, readers and editors share the excitement of taking something old — and, well, keeping it that way. You won't find slap-dash remodelling here, or any misguided fascination with the newest renovation fads. What you will find are the best restoration, maintenance, and decoration techniques, whether they're historically proven methods or recently developed innovations. In short, you'll learn just what homeowners and restorers have learned about living with old houses. The Journal's technical staff and advisors have checked all the facts and techniques to make certain that they'll work for you. This practicality is the essence of The Old-House Journal. All the information in this Yearbook is up to date, and written with a realistic sense of what is technically and financially possible for our subscribers.

Old-house living means plaster falling from above and water rising in the basement below. Nevertheless, it's an experience that confers a joy and fulfillment that no tract house or apartment can provide. Of course, joy and fulfillment may not be your immediate feelings as you dodge falling plaster or wade through the basement. But working on an old house is an adventure that you'll come to regard with satisfaction. You will have made a home while cherishing a piece of history — all without destroying the beauty of your old house or compromising the unique story it has to tell. Rather, you will have enriched that story and made it part of your own.

The Editors



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COMING... Making Wood Venetian Blinds

Restoration and Maintenance Techniques For The Antique House

THE ADIRONDACK RUSTIC STYLE

By Harvey H. Kaiser

URING THE PERIOD from 1870 to 1930, a style of domestic architecture evolved in the Adirondack region of northern New York State. The building complexes in this style were most comfortably set on a lakeshore or river, against a background of forests and mountains. They're characterized by the use of logs and indigenous stone, shingled roofs with broad overhangs and porches, and simply proportioned window and door openings.

ADIRONDACK RUSTIC LODGES, or camps as their wealthy owners called them. were built as summer vacation homes. Local craftsmen were hired to build lodges of native materials on a scale matching the "cottages" of Newport and the spas of Saratoga. Similar in design and construction, the camps have a selfsufficiency of structure and intention which mirrors perfectly

the personalities of their builders.

THE ADIRONDACK RUSTIC STYLE uses native materials and designs in the context of the natural environment. It's characterized by the definition of rustic: appropriate to

the country. Some link the style to European influences (particularly Alpine chalets). But fundamentally, it's the logical, inevitable convergence of local craft traditions and readily available materials.

ITH the third quarter of the 19th century, American domestic architecture broke away from the grand styles of the past and absorbed influences from comparable wooden styles of

wooden styles of
Switzerland and
Japan. Andrew
Jackson Downing and
his followers formulated theories
that insisted upon
'truthfulness' in
wooden construction, emphasizing
function and the
nature of materials, picturesque
massing, and freeform invention.

WHETHER OR NOT the earliest Adirondack camps were actually

designed by architects cannot be determined. But there is little doubt that they shared the same influences as these other developments. What the camps did was express individual spaces--such as bedrooms, dining rooms, and libraries--as distinct, bold

continued on page 30



Our new Editor-in-Chief

A New Editor... The Same Journal

OUR SLOGAN for this year is "1983 is a jubilee." It's our 10-year publishing anniversary...my house (where the OHJ began) is 100 years old...and it's also the Centennial of the Brooklyn Bridge. It's clearly going to be an auspicious year! As a result, there's an extra dose of energy and enthusiasm here in the office.

YOU'LL NOTICE a significant change in the masthead column to the right. Patricia Poore and I have become book-ends for the company. She has taken on the mantle of Editor-only the second editor-in-chief in Old-House Journal history. I'll be devoting more time to the role of publisher-the business side. (I'll still contribute by-lined articles to the issues, always my favorite task.)

DON'T EXPECT radical changes this month, just because we have a "new" editor. During the past two years as Managing Editor, Patricia had already been shouldering much of the responsibility for the planning, content, and look of the Journal. And her by-line is certainly familiar to our readers: She's written groundbreaking articles on slate roofs, cast-iron repair, floor finishing, and many other subjects. She was also the creative force behind our special

issues on energy conservation and old windows.

WHILE OCCUPYING the Editor's chair, Patricia will continue to write articles as well as fish for good manuscripts and pore over every page of copy, looking for the last typo. Meanwhile, one of my current projects is finding ways to make efficient use of our new in-house computer. (I must confess that after six months of operation, we've still got a long way to go!)

BOTH TRISH and I are excited about the team we have in place, and with the editorial plans for the coming year. Those things that make OHJ unique will remain: Our tight focus on sensitive rehabilitation, our explanations of the why behind the how-to, our preference for long-term solutions over slapdash remodelling.

THE JOURNAL will continue to be about more than fixing up old houses. We'll keep on sharing our appreciation of good old work and modern craftsmanship, along with our respect for the past. And we'll continue to demonstrate that it's possible to do good work economically, and have fun with it, too!

Clem Lalie

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We are happy to accept editorial contributions to The Old-House Journal. Query letters that include an outline of the proposed article are preferred. All manuscripts will be reviewed, and returned if unacceptable. However, we cannot be responsible for nonreceipt or loss — please keep copies of all materials sent.

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Left: Today, the original, 19th-century siding once again can enjoy the light of day.

Above: The porch was the worst casualty over the years; it had to be rebuilt from scratch.

Old-House Living...

Up From Asbestos: The Unmuddling Of Our Long Island House

By Ridgely Ochs and Robert Tiernan

WE BOUGHT our 1887 house on Long Island because we were captivated by the details: the carved sunbursts at the sides of the gables, the wavy old glass in most of the windows, the plaster mouldings, the solid brass doorknobs. These charming features had survived almost a hundred years, but the rest of the house had undergone several drastic face-

lifts. All the other details were obscured by peeling, dull-gray asbestos shingles. Unfortunately, these shingles could not obscure the water damage from leaky gutters both in the front corners and at the back of the house.

THE MORE TIME we spent in the house, the more we realized how badly it had been neglected. Below the built-in gutters, a bracket had fallen off from water damage. The hole it left was big enough to permit a family of squirrels to scurry in and store their nuts. They would race nightly through the ceiling of our bedroom. Some nights, it sounded like the Long Island Expressway! The \$300 traps that we bought from an exterminator were useless.



Ridgely and Robert stand in front of their house after completing a third of the work on it. To see what they had to cope with, turn to pages 4 and 5. (Photo courtesy Newsday.)

Of course, there was only one real solution: close up the hole. We had no relief from them until we were finally able to seal it shut.

WE WANTED TO DO A GOOD JOB restoring our house, so we went to the town historian. He put us in touch with Gay Wagner, an architectural historian. After talking with her, we decided to

do the restoration work all at once: restore the porch, repair the structural damage, rip off the asbestos shingles, and repair and paint whatever they were covering. We started in the early spring, cautiously ripping off the shingles on the back of the house.

UNDERNEATH the shingles, we found a layer of tarpaper. Underneath that, on the lower half of the house, was a layer of wood shingles that apparently had been added in the 1920s. It covered a layer of heavy paper and was fastened to the original clapboard by furring strips and hundreds of nails (a good number of which had rusted and were difficult to pull out). The clapboard siding, however, was in

surprisingly good shape. This encouraged us to keep going at it.

SOON WE WERE HOOKED. Every day, crowbars in hand, we would attack a different section of the house until we were knee-deep in rubble. At the end of each day, we would pack up the asbestos in boxes, the wood and paper in other boxes, and put it all out on the curb. But the garbage collectors finally decided we were throwing out our house piece by piece and refused our refuse. So we began taking daily pilgrimages to the dump.

AFTER WE BARED each section of the clapboard, we pulled out all the nails and filled each hole with wood putty to prevent any interim water damage. We found that latex putty was the easiest to work with because it dries to the smoothest finish.

Discoveries

Y MID-JULY, most of the house was uncovered. We found the outlines of lattice-like detail work on the front gable--it had all been ripped out to accommodate the asbestos. We decided to replace the ornamentation and bring back the Tudor influence that the house once enjoyed.

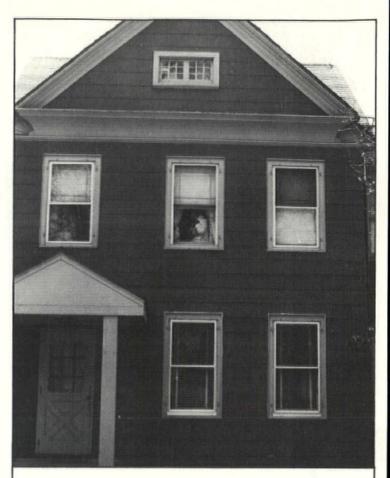
OTHER TIMES, however, we uncovered some real horrors. One especially chilling midsummer memory: We pulled off the asbestos and the wood shingle in the corner near the portico and found ourselves staring through a two-foot hole in the basement. There were no clapboards left, the sill was papery rotten, and the two studs were suspended above the brick foundation.

A SIMILAR PROBLEM was discovered in the back of the house. Although the clapboards were still intact, the sills had rotted and three studs were partially gone. The back kitchen wall was being held up by the clapboards! So we had a carpenter jack up the back kitchen



Top: Ridgely gathers some of the asbestos, wood, and paper that she and Robert ripped off the house. The row of black dots on the bottom clapboard are nails about to be pulled; the white dots are puttied nail holes. Right: The back of the house gets a coat of paint.





That beautiful old house pictured on page 3 had been remuddled into this asbestos nightmare when Robert and Ridgely first saw it.

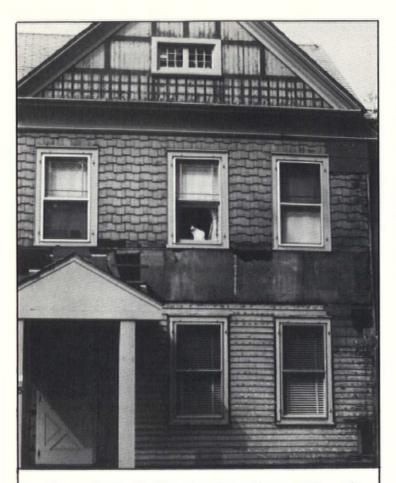
wall to make it level, replace the sill, and make sure that the wall was properly supported. Our kitchen did not sag anymore, but now our back door would not close and there were some sizable gaps in the wall, both at the window sills and where the cabinets had been attached

to the wall. The door was rehung and given a lot of weatherstripping, and all the gaps in the wall were puttied.

THE CARPENTER had to make similar repairs on the front corner of the house as well. All this work required specially milled clapboard, as we were unable to find stock replacements. After a dozen unsuccessful phone calls to special mill shops around the metropolitan area, we found a lumberyard less than a mile up the road to do the work for us.

Paint Problems

NCE THE HOUSE was uncovered, we got started on the painting. We scraped off as much of the old paint as we could. Where it still adhered thickly, we used heat plates. And here



After unmuddling the house, they discovered some surprises, such as these phantom traces of ornamentation on the top storey.

is some advice for anyone using such devices: Keep a fire extinguisher on hand. Despite our caution, fragments of paint, paper, or resin from the wood ignited a few times.

A SIMPLE PAINT SCRAPER was used on other areas of the house. Then we sanded each clapboard, first with a belt sander and then by hand, using medium-grade paper. To kill any lingering mildew, we washed each side with bleach, using a bristle brush. Afterwards, we hosed off the bleach with clean water.

GETTING THE NEW PAINT for our house was a complicated process. Early on, we'd decided to use historically correct colors; we also wanted oil-based paints. Through THE OLD-HOUSE JOURNAL, we discovered Sherwin-Williams' Heritage Colors of Victorian-era paints. After many phone calls, we learned that the only source in our area was in Staten Island, about 60 miles away.

WE WENT OUT THERE and bought flat oil-based primer, antique gold body paint, and a high-gloss for the trim. When we returned for more, we were given glossy paint and told that what we'd been given before was not one of the Heritage Colors, which comes only in glossy in the oil-based line. So we decided to try for a close match to the color from the previous batch--after all, we had already painted an entire side of the house.

Porch Problems

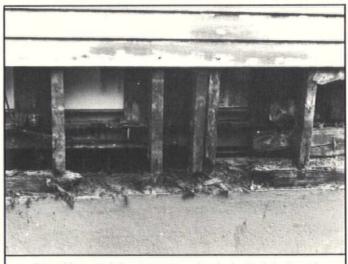
N THE MEANTIME, we began research on our porch. We scoured old pattern books and made many furtive drives past Victorian houses on Long Island which are similar to ours. A photo in the local historical society files showed a house (no longer standing) which bore a striking resemblance to ours. From this, we were able to replicate the original porch.

A POST THAT WAS STILL STUCK in the front yard suggested the dimensions of the old porch. It had been torn down and replaced by an ersatz portico, circa 1960, which defied classification. We found sheets of plywood covering the big gap where the porch roof had been attached to the house. There were holes between the plywood and the frame of the house--which explained our extraordinary winter heating load and compelled us to insulate the entire front wall.

ALL THE GRUNT WORK for the house--taking off the siding, refinishing, painting--we did ourselves. But rebuilding the porch was a job for professionals. Architectural historian Gay Wagner had given us good solid advice, as well as comfort on the bleakest days. She also helped us find a good carpenter, and that alone would have been worth the small fee we paid her. She introduced us to a couple of people who were just getting into restoration work in the area. After getting the price estimates for the job, we signed a contract with a builder named Paul Ahlers.

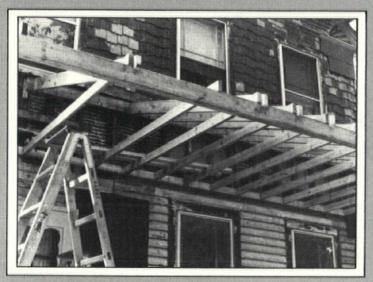
Down To The Wire

HERE WERE bureaucratic delays in getting a building permit. These, along with Ahlers' other commitments, delayed work on the porch until October. Once he started, he did a marvelous job, aiming for durability and appropriate design. He used pressure-treated wood for the floor frame and fir flooring. He tried to match the peak of the roof with what



Something certainly was rotten under the back of the house!





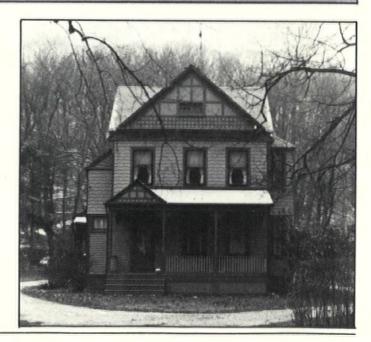


THE PORCH SAGA

Top Left: Remember that big strip of plywood in the photo of the house on page 5? Here's what it was covering up. When Robert and Ridgely exposed the roof line, it supported their assumption that the porch originally was on only the front of the house. (The sheets of tarpaper flanking the front door were replaced with newly milled clapboard.) Bottom Left: Initial construction begins on the new porch roof. Top Right: In this photo, work on the porch is well along. The roof is just about completed, and progress is being made on the columns and pediment over the entry.

at first appeared to be the old notch underneath a window. But the angle didn't look right, so he gamely tore it down and started over. The new roof is wood-shingled with red cedar shakes on two-inch nailing strips and copper flashing.

BY THE END OF THE MONTH, we had finished painting all but the front. The weather kept getting cooler, and we were worried about being able to finish all the painting in time. So, in the warm hours on weekends, during the builder's lunch breaks, we would clamber onto his scaffold fronting the gable and paint whatever he had completed. It was early December when the builder hammered the last nail, cleaned up the debris, and left us to put the final strokes of paint on our new porch. We beat the first snow of the season by only a couple of days.



DETECTING ELECTRICAL LEAKAGE

Wiring that's more than 50 years old can develop electrical leaks that are potentially dangerous. But these mini-short-circuits don't announce themselves with blown fuses. Here's a safe, simple way to test your wiring for worrisome symptoms.

By Dave Hardingham

HE BROWNS HAD A FIRE last night. The reason why is buried deep in the house's history. The house was built in 1883, and 20 years later was re-wired for those new-fangled electric lights. The initial 25-ampere service had a big switch, a meter, and a 6-circuit fuse block mounted on a pine board attached to the basement wall.

IN 1929, service was upgraded to 60 amps; baseboard outlets were installed to handle such things as floor lamps and small "dressing heaters." Then came an oil burner, washing machine, and an electric hot water heater. Each expansion of the system was done according to the latest approved method. Most new circuits in the basement or on the first floor began from the entry box and were individually fused. But some were simply add-ons to existing lines.

UPSTAIRS, add-ons were universally the case, as electricians took the easiest course and tied into the nearest live outlet. Because only two of the original circuits served the second floor, they became, in effect, feeder lines for all subsequent 110-volt service up there. And because of occasional overloads and blown fuses, a previous owner had replaced the 15-amp fuses on the second floor circuits with 25-amp fuses.

THE RESULT OF THE WIRING ADDITIONS was a dismaying maze of switchboxes, fuse blocks, and criss-crossed wires on the basement switchboard, complete with spider webs. In short, it was a dangerous-looking mess.

A "Re-Wiring"

HEN THE BROWNS purchased the house in 1979, they hired an electrical contractor to install 200-amp service and "re-wire" the house. The contractor did all of the normal things. He put in a new entryservice cable, external meter receptacle, and an attractive 36-breaker service panel. He ran a separate line outside the house to service the attic fan only. The 25-amp fuses were replaced with 15-amp breakers. The end result looked neat and tidy, and as a result, the Browns felt secure and satisfied.

HOWEVER, all of the original wiring remained inside the walls. The fire that re-

moved the roof and most of the second floor was started by this old wiring. The Browns, who had felt very safe after their "re-wiring," were astonished to learn that theirs had been an electrical fire.

EXCEPT FOR THE FIRE, this is a typical history of the wiring in many American homes over 50 years old. Therefore, other fires are waiting to happen.

The Arcing Hazard

THE ELECTRIC WIRING in your house was probably safe enough when installed, but has become less so with the passage of time. Like a person, wiring develops infirmities as it enters its "golden years." Principal diseases suffered by aged wiring are deteriorating insulation, metal embrittlement, loosened connections, and corrosion--especially in damp conditions.

MOST ELECTRICAL FIRES result from arcing between a "hot" wire and ground. An electrical arc produces intense heat. If it occurs near flammable material, the arc needs only a fraction of a second to start a fire.

ARCING HAS TWO primary causes: deteriorated insulation, and poor connections. Bad connections include embrittled wire that has broken but still maintains intermittent contact. The poor connection is almost always inside a receptacle box, and arcing occurs when the wire vibrates.

VIBRATION can come from street traffic, someone on the stairs, junior's bongo drums, a person plugging into the outlet, or a dozen other sources. Arcing tends to be self-limiting, because little by little the arcing points melt and eventually they no longer touch. But, in the meantime if there is combustible material, such as dust or old insulation, adjacent to the arcing, a fire can start.

SYMPTOMS OF ARCING include appliances that flicker on and off, and sparks or sizzling as you plug into an outlet. If you suspect arcing, make the inspection described on page 9. Arcing will leave plenty of visual evidence inside the receptacle box such as black scorch marks.

How Defective Wiring Can Start Fires



1. When there's a broken wire or loose connection, external vibration causes the wire to make and break contact intermittently.



2. Each time contact is made, a small electric spark is created. Usually, this arcing is harmless. But if there is dust, rodent debris, or other flammable material in the box. . .



3. The spark from the loose connection can ignite the adjacent combustible material and start a fire inside the wall.



1. Insulation on old wiring can become brittle and fall away. If the bare wire is in contact with high resistance material like dust in the box, small amounts of current can start leaking from the "hot" wire to ground.



2. The small current flow generates some heat. If there is a current surge (as in an electrical storm), there can be a buildup of heat—or even arcing—inside the combustible material.



3. If the heat builds up to the ignition point of the flammable material, a fire will start in the electrical box.

The High-Resistance Short Circuit

SECOND CAUSE OF electrical fires is the high-resistance short circuit. It's less common than arcing--but more insidious. A high-resistance short occurs when there is an insulation breakdown in the presence of a poor conductor such as dust. The high-resistance conductor allows small currents to leak from the "hot" terminal to ground. The current leak is not sufficient to blow a fuse or a circuit breaker...but it can cause a fire.

SOME HIGH-RESISTANCE SHORTS never cause fires; others do. It's a matter of chance. An extraheavy current load...a voltage surge caused by a summer lightning storm...any one of a dozen conditions could cause arcing or heat build-up that would cause a fire.

IF YOU HAVE any high-resistance shorts in your wiring, you can find them fairly easily. The test requires no special tools, you can do it alone, and you can do it in perfect safety.

Your Leak Detector

OUR ELECTRIC METER is the primary tool you use to trace down high-resistance shorts. The perforated aluminum disc turning under the meter's glass indicates current consumption. The more electricity you use, the faster the rotor turns. The rotor is sensitive to even tiny current flow. The power consumed by an electric clock (which is almost none at all) might slip by; everything else will register.

MOST ROTOR DISCS are graduated into 100 divisions around the rim. Watch these little graduations, since the current in high-resistance shorts is very small--about .05 amp. On the meter in my house, for example, a current flow

of .05 amp moves the rotor disc only one small division every 50 seconds.

Locating The Problem Wire

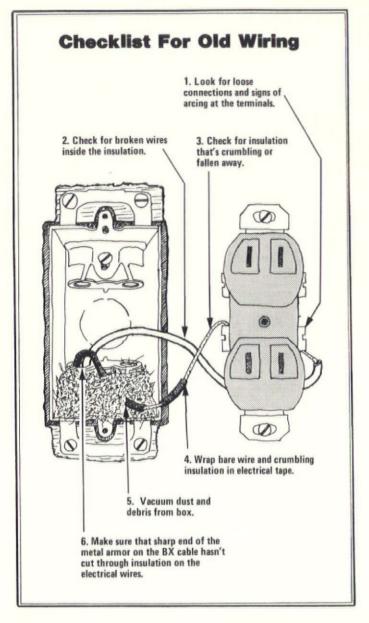
power IN all of the house wiring, but with NONE of it being used. Go through the house and switch on every light, chandelier and fixture. Then disconnect the load by unscrewing all the bulbs. Don't forget wall sconces, closet lights, outside lights, clocks, and other easy-to-overlook appliances. Unplug the refrigerator, and any other timer-controlled device that might switch on.

YOUR ELECTRIC WATER HEATER may not have an "off" switch, and thus might start drawing power during your test. Disconnect the heater by pulling the fuse or opening the breaker.

NOW GO WATCH your electric meter for at least a minute. If the rotor doesn't move even one small division, you know that all the energized wires are secure. If any fixtures are operated by multiple switches (such as a hall light operated from two locations), flip each switch individually, checking the meter each time.

TO CHECK OUT your water heater circuit, turn the thermostat down, or wait until the water comes up to the set temperature. In either case, you want to be sure the heater isn't drawing current. Then check your meter for rotor movement.

HOW DO YOU CHECK THE WIRING on remote-switched devices, such as an attic fan that has its on/off switch in the kitchen? First, turn off the power at the breaker panel. Then, go up and disconnect the motor. (Be sure to tape the bare wires, or position them so they



don't touch each other or anything else!) Then turn the power on and watch the meter. If there's still no movement, the wiring is OK.

What If The Rotor Moves?

F YOU DO INDEED have rotor movement, first check to see that you haven't forgotten to unplug something, like a freezer in the cellar, or a closet light. If nothing is on, the next step is to isolate the circuits that are drawing power.

FIRST, remove all line fuses or open all circuit breakers. This disconnects all circuits. If the meter still moves, the leakage is in the breaker panel, main switch, or related wiring. Best bet here: Call an electrician.

BUT IF the rotor is stationary after disconnecting all the circuits, connect one circuit at a time and watch for rotor movement. As soon as you find a circuit that makes the rotor move, mark it and disconnect it again. Even if you

isolate one leaking circuit, continue the checking process. You may find additional circuits with problems.

NOW, FIGURE OUT where the offending circuits go. It'll be easier if you have a map of your wiring (see p. 10). With only the bad circuits turned on, start reactivating the load: Plug in the refrigerator, screw in light bulbs, etc., so you can see which appliances are connected to the problem circuits. To test outlets, take a small lamp and plug into EVERY outlet in the house. Don't assume anything by location; distant outlets may be tied to the same circuit.

The Remedies

REPAIRING FAULTY WIRING is relatively easy. But if electricity makes you nervous, you should call an electrician after isolating the troublesome circuits. If you prefer to do the repairs yourself, here's what's involved.

SUPPOSE YOU FIND the bad line serves three outlets and two wall switches, and that the two switches operate a chandelier and a porch light. Turn the power off, and inspect the switches, outlets, and light fixtures. Usually, the bad insulation will be in the last few inches of wire attached to the terminal.

REMOVE THE COVERS from the outlets and switches, and pull the outlet or switch well out of the box so you can see the wires. Remove dust and debris from the box with a vacuum cleaner. Look for dried or cracked insulation, and check all connections for soundness.

IF THERE'S INSULATION FAILURE, wrap electrical tape around the wires as far back as you can get. Look for signs of arcing, such as blackening, pitting, or melting. Where you see these signs, wiggle the wires to look for loose connections. Also wiggle the wires to be sure they aren't broken inside the insulation. Should you find a break, the remaining wire may be long enough to reach the terminal. If so, strip it back about 5/8 in., being careful not to nick the wire (this is one of the primary causes of fatigue breaks).

IF THE REMAINING WIRE is too short to permit a full wrap under the terminal screw, DON'T attempt to splice a piece onto it. Get an electrician to make the repair your local code requires. (Illustrations of the kinds of low-cost repairs that can be made will be found on page 11.) As a general rule, a splice must be made within a UL-approved box that is located so as to be permanently accessible. In some cases, the splice can be within the box that the switch or outlet occupies. It's best to seek an electrician's help with this, or you may void your fire insurance.

DAVE HARDINGHAM's basic interest now is the restoring of Early American antiques. He is, however, a man of many talents. A mechanical engineer by training, he helped develop the spacesuit used on the first moon walk. Not limited to finishes on furniture, he also wrote a series on interior painting for OHJ (Oct., Nov., Dec., 1980). Dave lives in an early 20th century house in Reidsville, N.C.

MAP YOUR ELECTRICAL SYSTEM

OST OLD HOUSES have raggle-taggle electrical systems that have been added onto over the years. Because of this hodge-podge, it is extremely helpful to have a detailed map of your electrical circuits--even if you never do any electrical work yourself. Here's why:

- (1) When you have to turn off power to a fixture, the map tells you which fuse or circuit breaker to pull. All trial-and-error guesswork is avoided.
- (2) When you kill power to a circuit while you do some electrical work, your map tells you which other outlets and fixtures will be affected.
- (3) When a fixture blows a fuse, your map tells which fuse or circuit breaker to check. Conversely, if a fuse keeps blowing because of a short circuit of mysterious origin, your map shows which outlets and fixtures could be involved.

TO MAKE YOUR MAP, in a notebook or threering binder make a rough floor plan of each room in your house, one room per page. Then, on the floor plan, indicate the position of every outlet, light fixture, and appliance in each room.

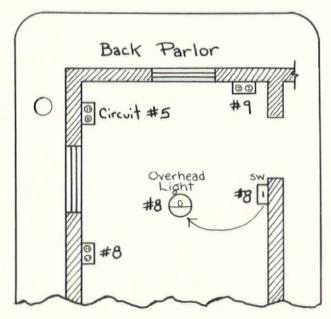
AFTER YOUR MAP is complete, determine by trial and error which fuse or circuit breaker controls each device. It's helpful to have an assistant for this project. Your assistant can shout down to the cellar to tell you whether the parlor chandelier goes out when you throw breaker #5.

IF YOU'RE WORKING ALONE, a portable radio can be your assistant. Plug the radio into the various outlets and listen for it to go off as you pull fuses. For ceiling lights and wall sconces, you can use a screw-in socket/plug adapter and plug your radio-assistant into the various light sockets.

IF YOU HAVE a new circuit breaker panel, the breakers should have numbers on them already. However, if you have an old fuse box, you may have to assign numbers to the fuses. Note on your map the number of the fuse or circuit breaker that controls it.

THE FLOOR PLANS show your electrical system room by room. Now create a cross-referenced list of the system, circuit by Assign a separate notebook page circuit. to each circuit breaker or fuse. going through your room maps, list each outlet and fixture that is controlled by that breaker. A further refinement: List the wattage of each appliance on each circuit. Add the total wattage on each circuit and divide by the nominal voltage This gives the total amperage load on the circuit. In the example, circuit #9 has a potential load of 20.63 amps. Since this is a 20-amp circuit breaker, the circuit would be overloaded if all appliances were used at once.

Part 1: Circuits In Each Room



Part 2: List Of Loads On Circuits

-W	Circuit #9 - 20 amps.
	Back Porch Light - 100 w
\circ	Outlet on Store
History III	Kitchen Overhead Light 100 w
	Outlet By Dining Room Door
	Bathroom Overhead Light 75 w
	Refrigerator 1,000 w
	Kitchen Outlet (Toester) 1,200 w
	2,475 w
	$\frac{2,475w}{120 \text{ y}} = 20.63 \text{ amps}$
	120 V

CURING CRUMBLING INSULATION

HIS HAS PROBABLY happened to you: You are hanging a new chandelier, and try to connect the fixture's wires to the electrical box in the ceiling. As you handle the old wires, the insulation crumbles in your hands. What to do?

SOMETIMES, crumbling insulation can be repaired by wrapping the bared wires with electrical tape. There's a danger, however, that the crumbling continues back into the cable connector where you can't see it--and can't tape it. If such is the case, there's the potential for arcing, blown fuses--and possibly a fire.

AN ELECTRICIAN might tell you that the only cure is to totally replace the old wiring. Although that is doubtless the best solution, it is quite expensive. And it's messy. There's a less expensive solution that can add years to the life of your present wiring.

THE INSULATION inside the casing of BX (metal armored) cable is invariably in better shape than the insulation that's been exposed to the air for many years. So to get wire with good insulation, it's usually possible to make use of cable that's already in the wall.

IF YOUR WIRING was properly installed, there should be slack in the BX cable leading to the electrical box

to cut off the deteriorated segment and re-connect the newly exposed wire to the box. Here's what you'd do:

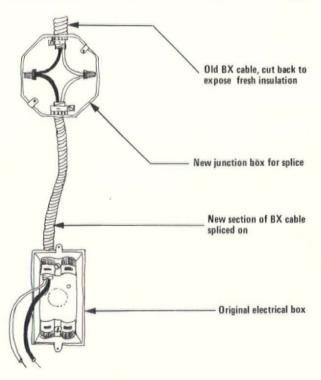
(1) TURN OFF THE POWER at the fuse box. (2) Chip away any plaster that's overlapping the edges of the electrical box. (3) Remove the fasteners that are holding the box in place and pull the box and cable away from the wall -- DIAGRAM A. (4) Remove the end of the cable from the box by loosening the screw on the cable (5) Pull slack cable clamp. out of the wall and cut 12 in. off the BX armor with a hacksaw--DIAGRAM B. (Be careful not to cut into the insulation on the wires!) (6) Insert red anti-short

collar between end of the armor and the wires. (You can probably re-use the old collar.) (7) Snip off the deteriorated wire. Insert freshly exposed wire back into the box and tighten the cable clamp-DIAGRAM C. (8) Fasten box back in place and patch plaster as necessary.

IF THERE ISN'T ENOUGH slack cable available to perform the above operation, you have another option. Disconnect the existing electrical box and cut back the BX cable as described above. Then install a junction box and splice in a short piece of new BX cable as shown in the diagram below.

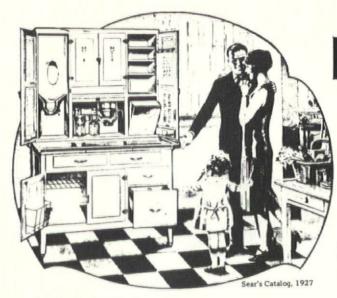
THERE IS another way out when you don't have enough slack to get a usable segment of wire from the old cable. You can use the existing old cable to guide and pull an entirely new section of cable through the wall. To carry out this procedure, you have to first find which box holds the other end of the cable. It assumes, too, that the old cable isn't being held someplace along its length with staples or plaster that would prevent its being pulled smoothly through the wall.

DEPENDING ON LOCAL CODES, you may have to leave these procedures to a licensed electrician. But if your electrical code permits, these simple repairs are within the capability of competent handypersons.



(A)

(B)



Re-Creating The 'Modern' Kitchen 1899-1930

Featuring Gas, Electricity, & No Servants
... Sound Familiar?

By Joni Monnich

HE KITCHEN is usually the first room to be attacked by house remodellers. Understandably...the layout may be an awkward composition from decades of technological and idiosyncratic style changes. Cupboard space is usually inadequate. Appliances are outdated. Even the restoration purist will admit that, in a functioning household, a kitchen authentically restored to a period prior to the turn-of-the-century would present daily headaches.

BUT THE KITCHEN doesn't have to be excluded from the sensitive rehabilitation of your old house, especially if your house or a kitchen addition post-dates 1900. A '20s kitchen is not that different from the kitchen we know today. This article is meant to offer a view of the changing kitchen from the turn of the century through the 1930s. Whether you opt for a few period touches or a complete, authentic re-creation, an appreciation of "what it was really like" should help.

N THE AVERAGE PRE-1900 HOUSE, the kitchen lacked planned, organized space and the appliances we take for granted today. But the turn-of-the-century kitchen saw a radical

change. Orderly, sanitary, and functional were doctrine: Kitchens were referred to as a "house-hold laboratory" in many homemaker's manuals.

AT THE TURN OF THE CENTURY, all but the plainest of house plans featured a kitchen and a dining room, commonly separated by a pantry. The pantry could range from a large butler's pantry to a small closet or walk-through. A butler's pantry was a large room, about half the size of the kitchen, equipped with a sink for washing good glasses and china, and a serving/preparation area. The pantry featured large built-in cupboards, often floor-to-ceiling, and was accessible through swinging doors fitted with kick- and push-plates. Sometimes the kitchen and dining room were simply separated by a large cupboard that opened to both rooms. Cupboard doors in the dining room might feature small-paned or leaded glass, while the kitchen had plain, solid wood doors free of decorative trim.

"A PLACE FOR EVERYTHING and everything in its place" was the motto of the day. Thus the kitchen began to feature large built-in cupboards for household accessories such as



1899: Pre-1900 kitchens like this one were bare, stark rooms. The central feature was a wood or coal stove; truly up-to-date kitchens had running water. Note the fancy legs on the cast-iron sink in the corner.



1899: For the next thirty years, the regulator clock (look over the dumbwaiter door) and linoleum flooring were common. The round table was probably a dining room hand-me-down.

dishes, pots, and pans. Built-in ironing boards and dumbwaiters were also installed. A movable cupboard, now commonly called a Hoosier, was introduced about 1900 and was soon popular in many kitchens. In it dispensers were provided for flour (with a builtin sifter) and sugar, in addition to specific storage areas for spices, linens, etc. A narrow plain wooden table provided additional work space to perform the everyday kitchen tasks. By 1910,

the table had an enamel top or was zinc-covered. A marbletopped table for making bread was considered essential when space and finance permitted.

The Essentials



1920-30: Storage cupboards and a stool added to the comfort and convenience of the kitchen.

warmth in the winter.) This was consistent practice in some households until about 1930. Electric ranges and appliances were available just before 1900, but not used in most households until the late '20s because electricity was expensive and unreliable. Whichever mode of cooking chosen by the housewife, metal ventilating hoods commonly carried off cooking odors and helped maintain the mandatory "sanitary conditions."

SINKS, which by 1900 usually had the added luxury of running water, were made of "whiteware," an early-20th-century term for porcelain or white-porcelain-enamelled cast-iron sinks. the next thirty years, the sink remained virtually the same -- a free-standing model with two or four supporting spindle legs, a high-backed splashboard, and a single or double drainboard. A wooden rack or rubber mat was laid in the bottom of the sink to protect it from scratches and to decrease breakage. Although not as common, sinks were also made of soapstone rimmed

AS STOVES with baked-enamel finishes were common by 1900. They were used singly or in combination with a wood- or coalburning stove. (Gas, being cooler, was for use in the summer; coal or wood provided additional



1910: The windows in this model kitchen have rod-pocket curtains, popular 1900-1930. Made from sheer materials such as scrim, linen, dotted Swiss muslin, or cretonne, they were fitted to the window; rol-ler shades provided privacy. Herbs often grew in interior window boxes. The unpainted woodwork here isn't typical of most early 1900s kitchens.



1914: This photo is characteristic of the 20th-century kitchen: scatter rugs, a plain wooden work table, open shelving, and a water heater attached to the gas stove.

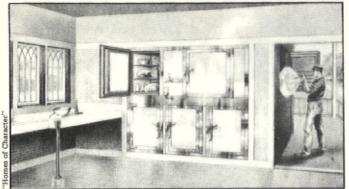
1921: Closed cupboards, a tiled wainscot, and the free-standing porcelain sink are standard features in the "modern" kitchen.



Mid-1920s: Besides the ubiquitous tiled wainscot and checkered linoleum, this kitchen has an updated version of the popular free-standing kitchen cupboard: This model is metal with "Chippendale" legs. It has flour and sugar dispensers and specific storage areas for utensils, spices, linen, etc.



THE "REFRIGERATOR" was a necessary appliance for the turn-of-the-century homemaker. Electric refrigerators were available before 1900, but the overwhelming majority of houses had insulated, metal-lined, heavy wooden boxes until the late '20s. If not free-standing, these iceboxes were located on the back porch or along an exterior wall of the kitchen for outside "icing" -- the iceman could make his weekly delivery without disturbing the household. By the coil-top electric refrigerator was a familiar sight in upper-middle-class kitchens.



1913: A refrigerator designed for outside "icing" was recommended for the kitchen. This model even has a spigot for running water.

Ceilings, Walls, And Floors

HITE GLAZED CERAMIC TILES replaced wood Wainscotting in the kitchen at the turn of the century. Wall areas not tiled were given a shiny coat of white enamelled paint. (Enamelled paint stood up to ceaseless scrub-Before 1930, wallpaper, unless glazed, bings.) was considered unhygienic for kitchen walls. Any kitchen woodwork was usually made of birch, free of decorative mouldings, and painted with white enamel. The only exception to this was the occasional mahogany-stained door. Another deviation from this pure, white, sanitary-looking environment might be a course of colored tile as trim in the wainscotting, or a pat-terned linoleum floor. This was especially the case by 1910. Blue and white

or black and white were the most common color touches. Ceilings, whether plastered or metal, were painted white as well.

BY 1910, KITCHEN FLOORS were covered in a variety of durable materials including large, redclay quarry tiles, small white hexagonal ceramic tiles, concrete, and granolith (an artifical stone made of granite cement). The last two types of floor coverings would have been tooled to resemble tiles. Pine and hardwood floors were acceptable only if you couldn't afford one of the other "superior" coverings. Linoleum, which had been introduced in 1863, was still considered the most desirable Solid. floorcovering. colors like battleship grey or checkered patterns (usually in black and white),



(above) By the '20s, most kitchens had built-ins. (right) 1918: The per-forated drainboard in the butler's pantry was placed over the radiator to dry dishes and raise bread.



were preferred. Substitutes such as heavy, painted oilcloths were used when cost was a Whatever choice one made for overall factor. flooring, it was suggested that a resilient cork or rubber mat, or carpet runner, be placed in front of the sink, range, and work-table for the comfort of the cook's feet.

IN ADDITION TO WINDOWS, light was provided by oil-lamps on metal wall brackets, gas fixtures, or bare electric light bulbs. During the transitional period from oil to electricity, most kitchens had at least two of these means of There was always at least one fixture above the stove, and another by the sink. Another essential feature of the working kitchen was a reliable mantel clock on a special clock shelf, or a key-wound eight-day wall hanging clock. A good selection of pots and pans in graniteware, aluminum, tin, or cast iron was considered a necessity. By 1920, plate-rails considered a necessity. By 1920, plate-rails or shelves were coming into style; one would have been installed in the kitchen if there wasn't a dining room. In some kitchens, especially commercial ones, a hanging rack for

utensils and pots would be placed over the work table for

easy access.

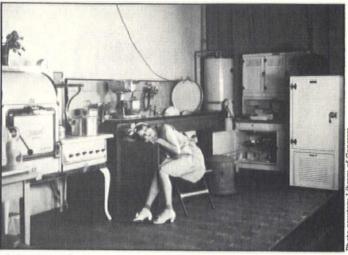
A Place To Gather

ONCERN OVER SANITARY conditions in the kitchen waned just before 1930, when electricity was gaining popularity. With clean-burning gas and electric stoves, long-wearing linoleum, and tiled walls, the kitchen was an inherently cleaner place. Gas and electric appliances, enclosed in streamlined units, predominated. The sink and work area were also enclosed, often with storage cabinets underneath -- eliminating the need for a pantry.

AT THIS TIME, there was a reaction against the "laboratory kitchen." One reason was that

The Pantryette





(left) 1932: The "sanitary laboratory" has been transformed with color. While most kitchens weren't as extreme as this 'peasant-style' model, bright colors were applied to the walls, floors, cabinets, and curtains. Knick-knacks, pots, etc. were displayed. (above) 1930: The World Columbian Exposition in Chicago (1893) featured a completely electrified kitchen, but electricity wasn't common until about 1930. This photo, "Asleep at the switch," promoted the concept of mechanization; the once harried housewife had only to turn on the switches.

the dining room began to shrink or even disappear from house plans. The kitchen became a place to gather and eat -- not just work. In place of sanitary white, pastel shades

(especially beige, light green, and light blue) covered the woodwork and bright primary colors were used to deco-Washable wallpapers in folksy patterns and prints became popular in the early '30s and continued in vogue until the '50s. Cotton-hooked rugs of a vague Colonial design were laid over existing linoleum in front of the sink and under the kitchen table. By this time, furniture was being mass-produced specially for the kit-chen; a kitchen set usually included a table (wood or metal) with four matching painted chairs. Painted china spice cannisters, iron trivets, salt and pepper shakers, and brass and copper pots were frequently displayed on corner knick-knack shelves and on wall shelving.

major components: room layout, appliances, sink, and flooring. Even here, there is room for interpretation. (Not everything changed all at once in the past, any more than everyone in our generation ran out and purchased a microwave oven as soon as they became avail-

IF THERE'S SOMETHING special
left in your kitchen -tile, wainscot, glassdoor cabinets -- use it
as your cue to your
decorating scheme.
Then as now, decoration
depended on the homemaker's taste. Just
watch out for obvious
incongruities...reproduction Colonial folk
stencilling in a 1913
Craftsman-inspired house,
for instance.



By the late '20s, the plain work table had been replaced by a "breakfast set" — a table for eating and working, with four matching chairs.

Your Period Kitchen

HE KITCHEN, more than any other room, is influenced by practicality and function. Decorating style is merely a cosmetic veneer over the technology. If you are interested in a period kitchen, look first at

We'd like to give special thanks to Michael B. Jackson for sharing his research paper with us. "The American Residential Kitchen, 1900-1920" helped to support our own research and fill in missing details. Mr. Jackson, an architectural historian, has a Master of Science in Historic Preservation from Columbia University.



Interior Exterior Stucco

The PLASTER WALLS of our pre-1825 frame house were repaired at some point with a thick layer of a granular, cementlike plaster. Moreover, the walls are in terrible condition. Removal of the plaster seems to be the only alternative, but the exterior layer is so hard that it's very difficult to penetrate. Is there an easier method than just chipping away at it bit by bit? Are the laths worth saving along with the plaster?

-- Rose Hazel Buckland, VA

TOE'D SAY THAT somebody applied exterior stucco (a portland-cement mortar) to your ■ interior walls. You'll probably have to remove all the plaster, old and new, and then replaster, either onto wire 1ath or gypsum board, or else onto the original lath. Good historical reasons aside, we don't recommend that you try to save the original lath. But if you do, be sure it's well soaked with water before plastering, or else coat it with a latex bonding agent. If you don't take one of these precautions, the new plaster will crack. for the old plaster, the only way to get it off is just to go at it with a wrecking bar and a hammer. When you demolish the old plaster, make sure you have plenty of drop cloths or plastic over everything; practically no job is more messy.

Sheetrock In The Bathroom

AM REMODELLING my bathroom and have to remove a lot of deteriorated plaster. I wonder if plaster patching wouldn't be more expensive and time consuming than just removing all the plaster and putting up gypsum board. If I go ahead with the gypsum board, can I expect problems in the future if I need to remove wallpaper or repair ceramic tiles?

-- Ken Bohl Lombard, IL

GYPSUM BOARD, or Sheetrock, should be the water-resistant variety (W/R), with green facing paper, if it's to be used in your bathroom. It is a suitable base material for tiles and can be painted just the same as any other Sheetrock. Follow the manufacturer's recommendations for installation. Any cut edges and nail holes should be puttied with a special water-resistant compound. You'll be able to remove wallpaper as long as you either size the wallboard or paint it with a primer-sealer designed for gypsum board before you wallpaper.

Coffered Ceiling

UR DINING ROOM CEILING is coffered with wood and has what I thought was a plaster decorated ceiling within each square. But when removing paint from the wood, I found that it was not a plaster ceiling. Rather, it is some kind of heavy cloth with plaster decorations adhered to it. I'm afraid to wash this material, but it has to be cleaned. Do you know what this material is and how I can go about cleaning it?

-- A. M. McDonald West Bend, NJ

UDGING FROM YOUR DESCRIPTION, we'd say you have one of a variety of ready-made, decorated ceiling panels that were common around the end of the 19th century. Such panels were sold in squares designed specifically for installation in a coffered ceiling such as yours. They were usually composed of plaster on a heavy cloth backing with an addition of glue or size for stiffness and strength.

UNFORTUNATELY, the problem of stripping paint from this material is a particularly thorny one. You're best off simply washing it <u>lightly</u> with soap and water-be sparing with the water-and then repainting. If the accumulation of paint is so great that it obscures the details, you'll have to get up there with dental picks and remove the paint by hand.

Replacing Tile?

Y 75-YEAR-OLD TILE ROOF has problems. The valleys are leaky, and the previous owners used roofing tar as a solution-but it hasn't lasted. The felt underneath the tiles has deteriorated to a powder. A tile "re-lay" job is very expensive. Would it be remuddling to replace the tiles with asphalt?

-- David McCollum St. Louis, MO

SEVENTY-FIVE YEARS is quite old for most roofs, but a total reroofing job still may not be necessary. You should be able to

not be necessary. Y install new flashing in your leaky valleys with only a minimum of tile removal. If you don't have leakage problems elsewhere on your roof, don't worry about the powdering tar paper. (You couldn't count on roofing felt to keep out water, anyway.) As long as the tiles are sound and firmly

are sound and firmly attached to the sheathing, they'll shed water off the roof. Asphalt can't do what tile does for your home, but if the roof's unsalvageable, asphalt is more economy than remuddling.

Tarnish Your Brass

UTTING SHINY, solid brass fixtures in the bathroom of our Cape Cod Style house was a big mistake. Is there any way we can make them look antique? We don't want such an elegant look in our simple, cozy house.

--Betty Ellis Kingston, OH

ATIENCE. If your new hardware is solid brass, it will tarnish with time. The fixtures may have been lacquered to slow this process, but you can accelerate tarnishing by removing the coating with lacquer thinner. Air will then be able to get at the metal, and time will do the rest for you.

Stripping Cherry Wood

RECENTLY, I purchased a hall mirror with a cherry wood frame. I want to refinish the frame, which has been painted black. Paint removers get out most of the paint, but not what's imbedded in the pores of the wood. Is there a material or process I can use to remove all traces of the paint?

-- Raymond Zahm Brockport, NY

METHOD that we've found to be rather successful is to paint the wood with shellac after you've gotten out as much paint as you can with strippers. Allow the shellac to dry and then remove it with denatured alcohol or another coat of stripper. The paint in the pores tends to adhere to the shellac and come off with it. Another good method is to rub the frame with 0000 steel wool dipped in stripper; that'll really work the stripper into the pores of the wood.

Floors & Sub-Floors

AM PLANNING to install new flooring in my kitchen, using 1-inch by 5-inch tongue-and-groove heart pine taken from a 90-year-old house. The current flooring is linoleum on plywood, over a 1-inch by 6-inch diagonal subfloor. I have two questions: 1) Should I use any type of vapor barrier over the sub-floor? 2) Many of the boards are painted; how serious is the danger from sanding old paint that may contain lead?

-- James P. Rozelle Marietta, GA

YOU DON'T NEED a vapor barrier over a diagonal sub-floor. However, it is customary in your situation to put a layer of heavy building paper between the two; it will cut down on squeaks in the floor from wood rubbing

against wood, somewhat deaden sound traveling from one floor to the other, and keep dust from drifting down to the floor below.

YOU DO NEED a good dust mask if you intend to sand old lead paint--the danger of illness is very real. Besides, it's always a good idea to wear such a mask whenever sanding a floor. See the May 1982 OHJ for more details.

Fixing Wear Spots

IVE YEARS AGO, we had our pine floors finished with McCloskey's Gym-Seal. Now, there are several bad wear spots (small areas between rugs, etc.). Do you have any suggestions on how I might protect these spots and improve their appearance?

--J. S. Rapp Somerville, NJ

ECAUSE YOU KNOW the original varnish, you should have no difficulty recoating the worn areas with the same material. The most important thing is first to remove all wax and dirt that may have accumulated. Then sand the adjacent areas of good varnish to provide a rough surface for the new coat to adhere to. (Do a test patch first to make sure the old and new varnishes match well.) Remember to clean up the sanding dust thoroughly with a tack rag before applying the new varnish.

A Tale Of Tung Oil

RECENTLY stripped the cabinets in my serving pantry. Originally, they were stained and varnished. OHJ frequently mentions the advantages of tung oil as a finish. I'd like to touch up the stain and apply tung oil to the cabinets. However, tung oil penetrates the wood, and I don't want to do anything that a later generation can't reverse without damaging the original structure. Can tung oil be removed at a later time?

--W. E. Cornelius Staten Island, NY

OUR CABINETS are already stained, so the application of tung oil should in no way permanently alter the appearance of the woodwork--and it's appropriate for hard-wear areas like the kitchen. Tung oil is not removable, but it is compatible with either wax or varnish or even paint at a later date. So feel free to use it.

General interest questions from subscribers will be answered in print. The Editors can't promise to reply to all questions personally—but we try. Send your questions with sketches or photos to Questions Editor, The Old-House Journal, 69A Seventh Avenue, Brooklyn, NY 11217.

Helpful Publications

The Property Controller Markley Lee Jones 1982 (32 pp.) Paper.

The YOU HAVE a major renovation under way, this book can be a great help to you. It's a spiral-bound notebook in which you make a permanent record of renovation or maintenance on your property. In it, you log the names and phone numbers of the people who did the work for you, the costs, projected completion date, actual completion date, and other important details. This system is especially useful on small jobs that don't have a written contract. If you write in the notebook each date and price promised you--and have the contractor or supplier initial the entries--the notebook in effect becomes the contract. The vague promises suddenly become "official"!

To order, send \$3.95 each for 1-9 books, plus \$1.50 postage; \$3.75 each for 10-199 books, plus \$1.25 postage (special quotes for over 200 books) to:

M.L. Jones Property Renovation Consultants Dept. OHJ 3099 Maple Drive, NE Atlanta, GA 30305 (404) 237-4777

Respectful Rehabilitation Technical Preservation Services 1982 (185 pp., illustrated) Paper.

ATERIAL IN THIS BOOK is presented in 158 questions and answers, most of which have appeared in Historic Preservation magazine. The answers were prepared by the Technical Preservation Services Branch of the U.S. Dept. of the Interior. The advice is useful for anyone doing commercial rehabilitation—as well as domestic dwellings—and hoping to qualify for federal tax credits. The only problem? If your questions fall outside the ones listed, you're out of luck.

To order, send \$9.95 plus \$2.50 postage to:
Preservation Shops--Dept. OHJ
1600 H Street NW
Washington, DC 20006
(202) 673-4197

Brickwork Ronald Brunskill & Alec Clifton-Taylor 1982 (160 pp., profusely illustrated) Paper.

E LOVED THIS BOOK and couldn't resist
a short review, even though it's not a
how-to book for the average old-house
owner. It's a history--largely pictorial--of
brickwork in England from earliest times to
the present day. Warning: Looking at the pictures will make you a little sad. They show

what an exciting, creative medium bricks can be, and when you compare the photos to the construction we see today.... Builders and architects who work with brick should definitely have this book in their library. It can be a source of endless inspiration.

To order, send \$10.95 plus state sales tax to:
Van Nostrand Reinhold Company, Inc.
Attn: Customer Services--Dept. OHJ
135 West 50 Street
New York, NY 10020
(212) 265-8700

The Kovel's Antiques & Collectibles Price List Ralph & Terry Kovel
1982 (789 pp., illustrated) Paper.

THIS BOOK is the most comprehensive buyer's guide of its type available. It lists the more common items you'd find in shops and flea markets, not fine art and rare antiques. No item is listed that's priced more than \$9,999.00. (The median price appears to be in the \$200 range.) The biggest difficulty with the book is determining if the item you're pricing in a shop is comparable to the one in the book. For example, the guide lists "Plant stand, wicker--\$250." But there's a wide range in quality and design in wicker plant stands. Nevertheless, despite such limitations due to space, this book is a must for serious shoppers.

To order, send \$10.95 plus \$1.50 postage (New York and New Jersey residents add local sales tax) to:

Crown Publishers, Inc. Attn: Retail Sales--Dept. OHJ One Park Avenue New York, NY 10016 (212) 532-9200

How To Get Parts Cast For Your Antique Stove Clifford Boram 1982 (52 pp., illustrated) Paper.

FRE'S THE SAVING GRACE for your old wood or coal stove. This booklet lists sources for ready-made replacement parts and foundries that do custom casting. There's also a directory of people who specialize in stove restoration, as well as tips on identifying whether or not your stove can be repaired, how to deal with a foundry if you can't find a ready-made replacement part, and photos and drawings that identify various stove parts. All the sources are listed with full address, phone number, contact person, and the specialty of the firm. Indispensable for anyone who's considering buying an old 'unrestored' stove!

To order, send \$5.00 postpaid to:
 Autonomy House Publications
 Dept. OHJ
 417 N. Main Street
 Monticello, IN 47960

Fundamental Techniques for Foundation Shoring and House Jacking



by John Mark Garrison

ACK YOUR HOUSE UP? Dig out its very foundation? Such frightening prospects seem to tempt fate. After all, building construction follows a logical sequence from the ground up; how can the procedure be reversed? Yet temporary structural support is often a necessity for old-house work. Often, rotted or insect-infested structural timbers need to be replaced...or foundations may be insufficient or have been undermined.

THIS ARTICLE will outline a method for choosing and assembling a system of temporary support that's both safe and efficient. (We won't get into the nuts-and-bolts of sill or foundation repair -- look for this in a future article.) It'll also become clear that some jobs can be reasonably undertaken by a do-it-yourselfer; for others, you'll need more expert help. Also, the methods in this article are intended for wood-frame buildings. Leave the shoring of masonry structures to a contractor who specializes in such work.

SHORING REFERS TO any system of support which is used to temporarily take the load of the building, either during construction or while an adjacent member is replaced or repaired. On the other hand, JACKING refers to actually lifting all or a section of a building. Jacking can be used to correct settlements, or to raise the structure for another purpose.

THE SYSTEM of shoring or jacking you adopt depends on many variables: soil type, framing, amount of settlement, and underlying cause of the problem.

It's impossible for this article to present the "answer to your problem"

or even an exhaustive list of options. Each method must be tailored to the specifics of the building. But we'll offer some hypothetical problems with solutions that illustrate the basic principles and techniques.

Locate the Failure

N SOME CASES, the location of failure may be obvious; in others, it takes probing. Unless regular inspections have spotted problems early, settlement of part of the building will be your first indication of trouble below. Not all building settlement indicates serious structural problems, of course, but settlement which is continuing or is accompanied by other worrisome symptoms probably is serious.

[See the four-part series, "The Crack Detective," in OHJ issues May, July, August, and December 1981 for a complete discussion of structural settlement and cracking.]

FOUNDATIONS WERE sometimes insufficient (in some cases, non-existent) to begin with. The result is obvious structural failure of the wall. Soil settlement, due either to insufficient compacting of the fill or to changes in the water table, may also cause foundation failure. Interior piers or posts are frequently set directly in the dirt, where they are subject to rot and insects. In other cases, a post

rests on the thin slab of a basement floor that's too weak to support the transmitted load.

BECAUSE building timbers near the foundation are close to both moisture and masonry, they are most prone to rot and bugs. Probe the sill, floor joists, and even lower sections of wall studs carefully!

Find the Real Cause

YOU'VE LOCATED the area of structural failure, and you intend to replace the affected pieces. Even before repairs are begun, try to find out what caused the failure in the first place. Fix the underlying cause: If timbers were rotted, find out where the the water is coming from and stop it. The same goes for termites. Otherwise, you may be back in five years redoing the same job.

IF FOUNDATIONS have failed and you are unsure about the proper size and depth for replacement, consult with a reputable contractor or engineer for recommended practice.

[See "Wet Basements," OHJ August 1981, for information about foundation drainage and exterior foundation waterproofing.]

ANOTHER KIND of old-house pest is commonly to blame for structural failure...namely, plumbers and electricians. I've seen structural members cut, bored through, or otherwise rendered useless by unthinking human intervention.

Design Temporary Support

A SYSTEM of temporary support has to be designed for the unique structural requirements of each building. The house will be thus supported while work proceeds on the affected portion. Here are some general principles to keep in mind, whatever system you use:

- (1) TEMPORARY SUPPORT has to satisfy two basic criteria. First, it must allow space for the work to be carried out safely and efficiently. Second, it must logically transfer the building load to the ground. (See "The Hip Bone..." on this page.)
- (2) BEFORE YOU LIFT anything, investigate what connects to what -- and what doesn't connect -- in the structural system of your building. Otherwise, you may find part of the building being left behind as you raise a section. This is especially true of additions, the most frequent victims of structural failure, and also notorious for having been fastened to the house in illogical or surprising ways. Even if you

Load transfer to the ground STUDS SUBFLOOR 611 TO1515 FOUNDATION FOOTING. Transmitted build-Right: ing load can be carried on piers or on a continuous CONTINUOUS foundation. FOUNDATION STUDS **STUDS**

BALLOON

"The Hip Bone's Connected to the Thigh Bone"

YOU HAVE TO KNOW a little something about foundations and structure before you can design temporary support for a whole house. Although each building is unique and has to be studied by itself, there are some fundamentals:

A building is a series of parts linked together to transfer loads safely to the ground. If any link fails, it creates a dangerous situation. This article is about supporting the links closest to the ground.

In all forms of wood-frame construction, the wall loads are transferred by vertical members (posts or studs) to a horizontal member (the sill) resting on the foundation. In some cases, the sill is a relatively light piece of timber requiring continuous support from below. Or, it can be a heavier piece capable of acting as a beam — that is, capable of supporting loads across a span. When the sill timber acts as a beam, it can rest on piers or cap a continuous foundation wall.

If floor joists rest on the sill and are fastened to the sides of the studs, the house has balloon framing. Occasionally, joists are mortised into the sill, or rest in separate pockets or on a shelf in the foundation. With platform framing, the studs do not extend all the way to the sill, but rest instead on a separate piece (the sole or plate) on the first floor subfloor. Here, the ends of the first floor joists are covered on the outside with a header, which may or may not take some of the load. (This arrangement is called a box sill). On the interior of the house, floor joists are often supported at mid-span by a girder: a heavy beam at right angles to the joists, which is in turn supported on posts or piers.

Foundations themselves must be of adequate size and strength to support the accumulated loads above. Under ideal conditions, foundations should extend below the frost line to prevent heaving. They should rest on footings wider than the foundation wall itself (usual footings are 18 to 24 inches). Footings spread the transmitted load over a larger ground surface. Interior posts or piers should have similar footings, too, as they usually transmit the loads from a large area of the building above through a single post or column. And that's called a concentrated or point load.

A half-page description can't tell you all you need to know about structure. Read the series 'The Crack Detective' in OHJ's May, July, August, and December 1981 issues for a good explanation.

JO1515

GIRDER

BOX SIL

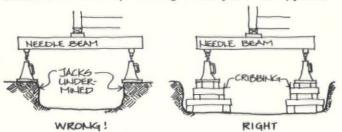
PLATFORM

FRAMING

SOLE

have to do a little demolition to see how things are really put together, it's better to do this now in a controlled way, than to face an emergency later.

- (3) SAVE AGGRAVATION by lots of advance planning. How much excavation is going to be necessary? Can it be done by hand, or will a machine have to get in? Where is the dirt going to go? Are all your materials on hand? If you get a hard stretch of rain, are you adequately protected?
- (4) DON'T LOCATE SUPPORTS where they will later be undermined or where they may have to be relocated halfway through the job. A typical



mistake made by an inexperienced worker is to place a jack or support at ground level, and then to undermine it by digging a hole three feet deep a foot away. Excavate your jacks first, or put them far enough away so further digging won't disturb them.

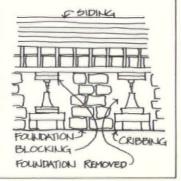
(5) DON'T GET NERVOUS, don't rush, think everything through twice, and work methodically! It's too easy in the interest of "getting it done" to knock out an annoying prop in a tight space; don't do it without really thinking through the chain of loads it's supporting. Most accidents are not caused by a lack of understanding of some esoteric engineering principle, but rather by simple carelessness.

(1) Shoring or Jacking from Directly Below

F YOUR FOUNDATION is insufficient or needs rebuilding, but the rest of the structure is sound, it is possible to dig out a section at a time and support it directly from below. This is probably the simplest system. Here's the procedure:

Disassemble carefully a small section of the deteriorated wall; dig down to the full depth of the new foundation; locate a jack and tighten it just till it relieves the load on either side of it. (Build the jack up on cribbing if necessary.) This method makes it possible to dismantle the foundation section by section. 'Leap-frogging' the jacks ensures that too much of one area isn't undermined all at once: Leaving sufficient masonry to support what's above, move three or four feet away from the first jack and insert another one, then go back and remove the section of foundation between them.

If yours is the heavy sill of a post-and-beam house, jacks spaced every few feet should be sufficient to support it. If it is a lighter sill, designed for continuous support from below, you'll need to spread the support of the jacks with an additional beam beneath the sill. It doesn't have to be a continuous piece, but may also be installed in sections. Never proceed to a new section until you are sure that the first is adequately supported.



Jacks, Posts, and Wedges

B EFORE WE LOOK at three typical shoring systems, here's a rundown of equipment. Some types of jacks are quite expensive, but almost all of them can be rented. They come in a range of sizes according to height, extension, and load capacity.

SCREW JACKS: These vary from about 12 to 20 inches in height and extend anywhere from 8 to 18 inches. (To ensure adequate support, the screw part should never be extended more than three-quarters of the way out of the base.) The screw is turned by a round bar placed in holes near the top of the screw; the cap swivels to stay stationary while the screw is being turned. These jacks are rated for load capacity.



HYDRAULIC JACKS: Similar in size and extension to screw jacks, these are operated by



pumping a lever with its handle at the base. They can be an advantage in tight spaces, where the handle of a screw jack would be hard to operate. On the other hand, hydraulic jacks are harder to control in lowering because they operate by a release of the hydraulic pressure.

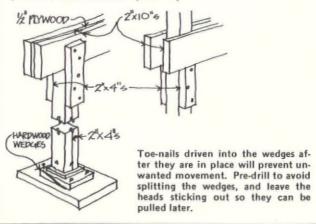
CRANK-HANDLE JACKS: I've come across another type of mechanical jack that has proven its usefulness on several jobs. A small jack, it's similar in appear-

ance to a hydraulic jack, but it's mechanically operated by a crank handle in the base. Some of these are sold as jacks for imported cars. (Mine came from a Toyota dealer.) Their advantages are small size and the crank handle's five-foot extension, which allows the jack to be operated from a distance in a space too small to get to directly.



'AQUA-JACKS' and 'RED-HEADS': For jacking floor joists from the cellar, or other tall jobs, a number of pipe jacks are available. Most are adjustable from 6 feet to 10 feet, with a screw on top to do the actual jacking. A variation is a screw mechanism which fits over the top of a 4x4 and can thus be adjusted to almost any height. These usually have at the top either a plate with nail holes for fastening to a timber above, or a cradle designed to hold 4-by lumber.

LUMBER and WEDGES: If you are simply shoring, or if jacking is minimal, you can use a system of wood posts and wedges instead of pipe or screw jacks. For girders and beams, a strong member can be made by spiking together two 2x10s or 2x12s so that the joints overlap with a ½-inch piece of plywood between them. Heavier (4x4 or bigger) posts may be used. Oak or hardwood wedges should be driven from both sides at once, and checked regularly for tightness. Lumber's advantages are its availability and economy — and it's easy to work with. But pounding wedges provides more shock to the structure than if you were to use screw or hydraulic jacks.

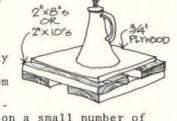


Transfer the Load

EMEMBER: In shoring work, we're not lifting the load, but transferring weight to the ground somewhere; nothing is "floating."
There are three major techniques for transferring the load of the building off the sill or foundation: (1) Jacking or shoring from directly below; (2) Jacking or shoring from under a transverse beam; (3) Needling through the walls of the building. The system you adopt may be any one of these, or a combination of all three. Following are some basic rules for using jacks -- which are often used as supports even in simple shoring jobs.

ALWAYS PLACE JACKS or posts on as wide a support of blocking as possible, never directly on the dirt. (Two or more layers each consisting

of two 12-inch lengths of 2x8 or 2x10, placed so that the grain of one layer runs crosswise to the other, is A 12x12 sheet ideal. of 3/4-inch plywood may be placed between the blocking and the bottom of the jack.) In shoring you are concentrat-



ing accumulated loads on a small number of points; try to spread each point load over a wider surface. Have different-size blocks of wood on hand for ad-hoc wedging and blocking.

TRY TO PLACE posts and jacks on undisturbed soil, not on loose fill. Even at this, be prepared for jacks to dig themselves in before they "settle in." Make sure that all jacks

remain plumb as they are being tightened. one starts to lean, take it out, re-dig a bit, or adjust the blocking with wedges.

NEVER PLACE JACKS where they will be near to digging. If you must locate a jack near a hole or trench, place the jack in a hole equal to



the depth of the final excavation so that it will not be undermined. A general rule says never dig out more than a 45° slope at a support.

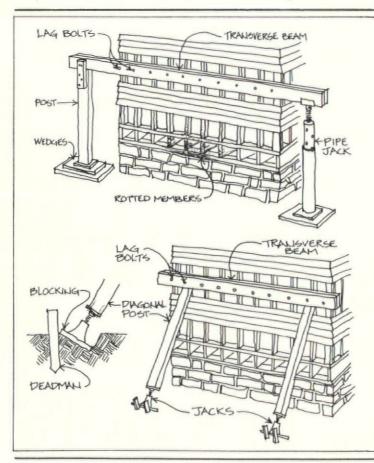
IF YOU ARE jacking on a horizontal beam with several

jacks, make sure that the beam remains level. The tops of jacks should be cleated with nails or blocking to prevent them from "swimming" out of their original position. This is especially imporant for jacks on the bottoms of posts.



AS THE SHORING proceeds, monitor, monitor, monitor! Constant inspection of all jacks and supports is essential, especially if work extends over a period of time. Differential settlement of the soil or building can cause some supports to take less load, others to take It's not uncommon to find jacks that were tight several days before to have suddenly come loose.

WATCH THE BUILDING, especially inside, for any signs of settlement or separation. Pay special attention to corners of plaster walls and trim around door frames. Of course, don't be surprised to discover some new cracks.



(2) Shoring or Jacking Under a Transverse Beam

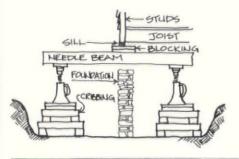
F THE SILL is being replaced, or the bottom of the studs or joist ends are rotted, you'll have to support the weight of the building from a point above the damaged area. You can fasten a beam across the wall and anchor it firmly to the studs or posts. This beam must be stiff enough to carry the whole span of the section being worked on. It should be fastened with screws or bolts capable of supporting each vertical member.

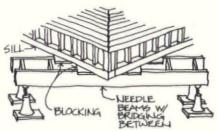
A section of siding has to be removed for direct access to the studs. Heavy lag screws should be used to fasten the beam to the studs. On a short wall, this beam can be continued out beyond the corners of the building, then supported with posts to the ground on either end. On a longer wall, intermediate posts may be placed at an angle at intervals along the wall, resting on jacks or driven up The post bottoms have to be brought far enough with wedges. away from the wall so that they don't interfere with the work, but the posts should be as close to vertical as possible to provide the maximum lift with the minimum lateral push. If jacks are used under the posts, their bases should be set at the appropriate angle with blocking, and firmly fastened with deadmen to prevent slipping.

Be sure you know your framing system before lifting a wall this way. If you have balloon framing — and if the bottom of your studs and the joist ends are sound — lifting the studs will lift the floor, allowing access to the sill. But if you have platform framing, or if the floor joists are supported independently on the foundation, the joists must be lifted separately.

See the December 1980 issue of OHJ for full-page illustrations of timber framing and balloon framing details.

(3) Needling Through the Wall





Needle beams



right angles to the wall, each in turn supported by posts on either side of the wall. (That's instead of supporting the transverse member from the ends or with slanted posts as shown on the previous page.) This procedure means having posts inside the house, which normally must be carried right down to the basement. If that re-

N EEDLING consists of placing a series of

be used by itself to support the sill for

foundation replacement. Or, it can be combined with the transverse-beam method to

In the latter case, additional beams are

placed under the transverse member at

support the wall from higher up.

beams through the wall to carry the load of the building above. The method can

quires a lot of otherwise unnecessary demolition, it's obviously a procedure that has its disadvantages. On the other hand, floors may already be damaged or scheduled for replacement. The advantage of this system is that, while it usually involves having more vertical supports, it carries them further away from the foundation, thus allowing more uninterrupted working space.

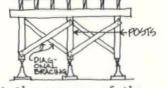
If the needle beams are merely supporting the sill, the interior jacks, being below the first floor, do not require interior demolition of that floor. Here again, take care to avoid point-loading on the sill. Each needle should have blocking to spread the load as far as possible along the wall. Corners of the building may be needled on the diagonal, passing under each wall with jacks on the outside. It is standard to double the needles in this location due to the doubled load of the two walls.

Prevent Latera! Movement

YOUR GOAL has been to transfer the load of the building in as straight a line as possible to the ground. But other forces are at work in a lateral (sideways) direction. Once a building has been lifted off the foundation, it is a different structural system, conforming to different rules. The way it behaves to wind loads, banging from heavy hammers or power tools, or even people walking in it, are all different from what you've been used to. This is not a cause for alarm unless you were unaware of it and haven't headed off potential disasters.

WHEN THE WHOLE HOUSE or a section of it is supported on jacks, there is a tendency for all

those jacks or posts to topple in the same di-This tendency rection. is greater the higher the posts. Provision has to be made to prevent this. Diagonal bracing is one solu-



Diagonal braces at the corners of the tion.

building or wing can also be used. Remember, if the building is being jacked at the same time, these lateral braces will have to be tightened as the building moves up. Needle beams should also be stabilized with bridging or blocking similar

to that used between floor joists to prevent "roll-over." These beams should be nailed off wherever possible to prevent sliding.

Don't Overdo It

CETTLEMENTS occurred over years or decades. Don't try to take them out overnight. building has probably adjusted to its new position, so it needs to move slowly. Especially if you have interior plaster walls you are trying to preserve, "go slow" is the key. Most screw jacks are designed so that either two or four turns equal a change in height of 1/16 inch. Never take more than two or three turns on a jack in any one day. Spread the Use your ears jacking out over a long period. as well as your eyes to spot signs of distress.

IF SOME SECTIONS need to be jacked drastically to be brought back into alignment, major damage to plaster can be prevented by making "control cuts" in the corners of rooms so that one wall may move relative to the other without destroying the plaster on either.

A BIT OF SETTLEMENT is charming, and preserving some of it is common sense, besides. Don't go for broke jacking an old house. It would be nice to have level floors and doors that shut, but not all unevenness can or should be correct-Only problems due to serious structural failure really need fixing. 冊

An upcoming article will discuss repair and replacement of structural timbers and foundation walls. In the meantime, you can refer to the articles cited in these pages, as well as "Demystifying Epoxy," May 1982, and "Wood Splice Joints," April 1980. See also "Do You Want To Move A House?", October 1981.

Contributing Editor John Mark Garrison is a veteran of several house-jackings. Illustrations are by Jonathan Poore.

What's Behind Sagging Plaster

USE T-BRACES from below to raise and prop up the ceiling. If the old vertical wood ties interfere with leveling the ceiling, pull them off.

A plaster and lath ceiling that's otherwise sound can separate from the house framing structure above. Here are two specific causes with appropriate repair techniques — and, while you're up there, a quick fix for a dangling plaster medallion.

LASTER REPAIR isn't the subject here; instead, shown is a minor structural repair to a ceiling where the plaster is assumed to be securely keyed to its lath. Our first case occurs on the top floor of a flat-roofed house when the plaster-and-lath ceiling is attached to nailers which were hung from the rafters by vertical wood connectors.

THE VERTICAL TIES sometimes break as a result of trauma...storage of heavy items above the ceiling, or an insulation contractor crawling around. In masonry buildings, differential shrinkage is often the culprit: The wood prop wall shrinks while masonry bearing walls remain stable. The result is cumulative internal settlement which is most severe on the top floor. Eventually, nailers and plaster ceiling are ripped away from the vertical ties. The ceiling ends up floating on those flimsy nailers over an impossibly long span.

THE PROBLEM isn't hard to recognize. Though apparently sound, the ceiling will sag noticeably. Take a T-brace and gently lift the sag: You'll be able to move the floating plasterand-lath assembly as if it were a diaphragm. Poke your head up into the cockloft, roof plenum, or attic to substantiate your guess.

AS SHOWN in the photo, you'll probably have to cut slots in the lath and plaster to gain access to the space above the ceiling. Drill exploratory holes to determine the direction,

location, and spacing of nailers. (They are usually perpendicular to the rafters.) Depending on the height of the cockloft and the width of the room, you may need several parallel slots for access to every affected nailer.



DIG OUT all previouslypatched cracks to allow the ceiling to move back up into a flat plane again.

CUT PLASTER with a fixed-blade utility knife and demolish; cut lath with a saw. Be careful of electrical wires and gas lines, especially near a medallion.

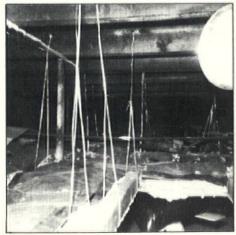
GET A LADDER and stick your head and shoulders up into the hole. Screw lag bolts into the rafters, up to every two feet on center in both directions. (With a hex-head bolt you can use a socket wrench.) Using heavy-gauge wire, sling the nailers from the rafters: Double the wire and wrap it around the lag bolt. Bring it down, threading it between lath and nailer in a void near a plaster key, and wrap it back around the nailer. Twist it tightly around itself. See drawings opposite.

TO REPLACE loose-fill insulation you may have disturbed, staple fiberglass batts in the slots. Unless you're an expert plasterer, patch with ½-inch gyp-board (Sheetrock).

THE SECOND CASE, more common, is easier to fix because all repairs are from below. In this typical construction, the lath was nailed directly to joists or rafters. Often, the nails were inadequate; over the years, wood shrinkage and the weight of the plaster pull the ceiling away from the joists. From below, look for smaller, localized bows or sags.

TO FIX THE PROBLEM, again find the joists, then measure and mark their locations with chalk lines snapped across the ceiling. From below, drive gyp-board screws through the plaster and lath up into the joists as often as necessary, say, every four inches on each joist where sagging is apparent.

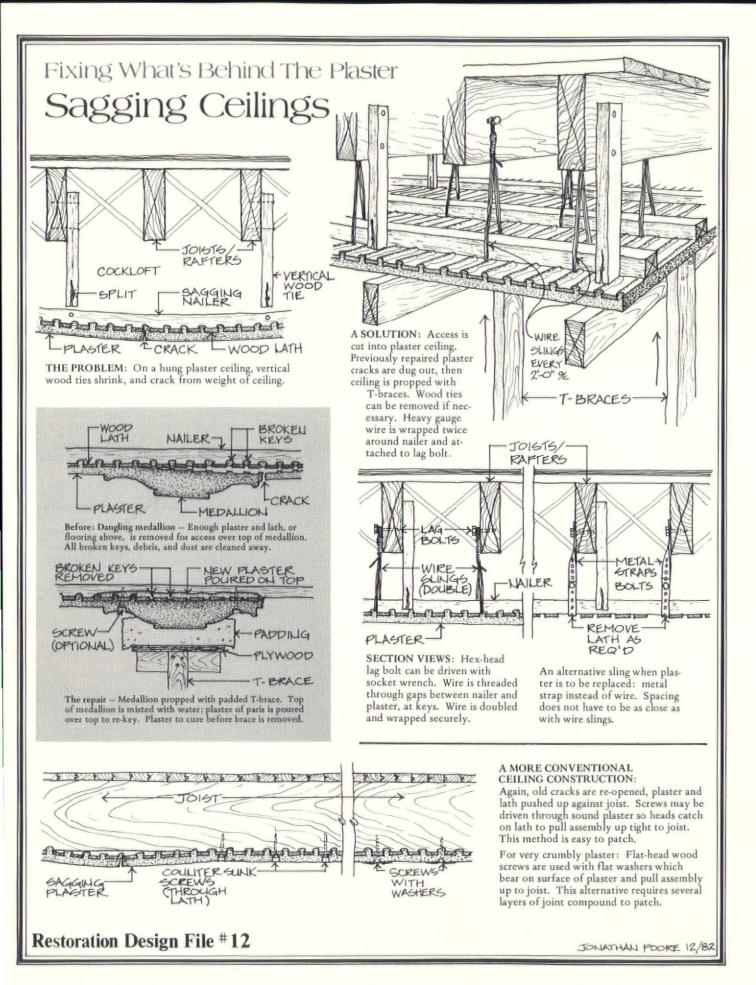
ONLY SCREWS that hit lath will hold. If you can, use a screw gun set to countersink the heads. Or use an electric drill with a Phillips head bit chucked in. Use 1½- to 2-inch gypboard screws. Patch the holes with spackling compound and finish with a skim coat of joint (taping) compound.



The view from inside the cockloft: New wire slings, hung from lag bolts in the rafters, are wrapped around the nailers which hold lath.



A drooping plaster medallion, shown propped in place with padding. Plaster of paris was poured over the top to re-key it.



Tips From Readers

Restorer's Notebook

Dating Your House

ERE'S A GOOD WAY to authenticate the age of your old house: Find the date on the back of a door or mantel mirror. It was a frequent practice to stamp the date on the back of a silvered mirror. When I removed the mirror from the bedroom door of my Queen Anne house, I found the date stamped January 1917. I have also found dates stamped on several mirrors that were on golden oak furniture that I refinished.

Paul Schoenharl Norwood, OH

The Sawdust Solution

CHICAGO AREA salvage yard uses this process when stripping woodwork and doors. I have tried it and found it works exceptionally well. Allow the paint stripper to penetrate long enough to do its work. Then cover the stripper with a generous portion of sawdust. After the sawdust soaks for a while, brush it off by hand with heavy-duty rubber gloves. You'll be surprised how well this works. The sawdust can be re-used several times, and if you run out of it, any local millwork shop can supply you with as much as you need.

James Brennan Riverside, IL

Peel Off That Paint

E FOUND one method of stripping that is fast, easy, and clean. It produces almost no dust, does not vaporize lead paint or scorch wood, and requires no elaborate set-up or clean-up. It does, however, depend upon the wood having been first shellacked or varnished; I don't know if it would work on wood that had been painted directly.

FIRST, apply a heat gun or electric heating coil until the paint bubbles. Don't scrape at this point--simply continue to blister the paint. (To avoid vaporizing the paint, don't hold the heater too close or let it linger over one spot too long. It takes a bit of experimenting to get the right combination of distance and timing.) Let the paint re-harden and then peel it off with a razor blade or wallpaper scraper. The latter is quite good for broad, flat areas such as door panels. For mouldings and corners, I use a carver's light chisel blade (Stanley multi-purpose knife #10-109A with an 11-112 blade).



THE HEAT breaks the bond between the paint and the shellac or varnish, and so the paint comes off in large strips. And there's little chance of gouging because you're peeling it off, not scraping. (Conventional scrapers can be used, but we found that these produce too much dust.) To remove the shellac left behind, steel wool and a spray bottle filled with denatured alcohol are handy.

Dale M. Hellegers Jenkintown, PA

Xylene To The Rescue

HE MAPLE FLOORS of our old Bungalow had been covered with foam-rubber-backed carpeting. When we tried to roll it up, we discovered it had been glued down. We pulled the carpet surface from the floor, but the backing remained firmly glued down. A rented, power-driven machine scraped off most of the backing, but the tough, latex-like glue stayed. Our paint store man recommended a solvent called Xylol (generic name xylene). We poured it on and waited a bit. The glue softened and scraped right off! A final going over with steel wool and Xylol removed every trace of glue and foam rubber. The varnish on the floor remained completely impervious to the solvent. One warning: Work in a well ventilated area and don't smoke while working.

Jane O'Brien Eau Claire, WI

Another Use For Nylons

fully refinishing a piece of furniture only to be disappointed by a thick, gummy-looking finish, you may be interested in the following tip. The directions on most cans of varnish recommend applying the finish with a soft, natural-bristle brush. But I've found an alternate method that seems to produce better results. I apply the varnish with an old nylon stocking, rubbing it in as if I were waxing a car. I use a high-quality satin finish varnish and allow it to dry completely before moving on to the next step. Between coats I buff with 0000 steel wool and then wipe all surfaces with a tack cloth. Three coats is generally sufficient, and the resulting finish is thin, even, and has the elegant appearance of a hand-rubbed wax finish.

Miles Guralnick Mifflinburg, PA

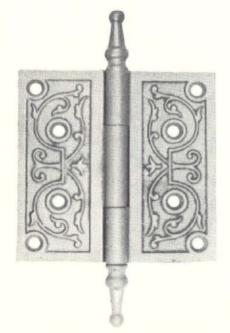
Tips To Share? Do you have any hints or short cuts that might help other old-house owners? We'll pay \$15 for any short how-to items that are used in this "Restorer's Notebook" column. Write to Notebook Editor, The Old-House Journal, 69A Seventh Avenue, Brooklyn, NY 11217.

Jestoration Jeroclucis News

Traditional Hardware And More...

Today, most companies offering Victorian-reproduction hardware sell only brass or brass-plated door hinges. Many of our subscribers have asked us about a source for such hinges in traditional cast iron. Ball & Ball, best known for their extensive selection of reproduction Colonial hardware, also offers Victorian hardware such as the cast-iron hinge pictured here. The $4\frac{1}{2}$ in. size is \$36/pair; the 5 in. size is \$38/pair.

Most of the items in their catalog can be shipped within two to six weeks. (Longer delays occasionally occur with multi-part items.) This company is also well known for their custom reproductions; of course, delivery time on these items is usually considerably longer. Their stock hardware can be seen in an extensive, 108-page catalog, \$6 by first class mail and \$4 via UPS or fourth class. Ball & Ball, 463 W. Lincoln Hwy., Dept. OHJ, Exton, PA 19341. (215) 363-7330.



Ball & Ball is a source for reproduction Victorian hinges in cast iron.

Hardwood Doors



Has your Victorian entranceway been "remuddled?" Jack Wallis has sixteen stock doors, including four limited edition designs, which can help return it to its original splendor. Not exact reproductions, these period-inspired doors range from heavy, ornate carved designs to a simple stile-and-rail frame with a large, stained glass insert. Hand-crafted in oak or poplar, these solid hardwood doors feature pegged, blind mortise-and-tenon joints. All doors are accented with wood mouldings and relief carving more finely detailed than usual in contemporary reproduction work. You have your choice of an etched, bevelled, or stained glass

With a durable marine varnish finish, the doors range in price from \$676 to \$2221. You can also order the door unfinished and without a glass insert. In addition, the company is pleased to do custom sizes and designs. A color catalog is \$3. Jack Wallis' Doors, Rt. 1, Box 22A, Dept. OHJ, Murray, KY 42071, (502) 489-2613.



Carved details on a Jack Wallis' door.

Paint News

Pittsburgh Paints has recently changed the formula of their exterior flat latex house paint. The company claims their sun-proof paint is highly resistant to cracking and peeling, even in extreme weather. It's said to be more durable than any other latex coating because the paint can stretch and shrink as the substrate expands and contracts. PPG feels that this is a major breakthrough in paint formulation, but it's too new for us to have reports from the field.

Available in 700 colors, including their historical color line, the paint can be applied over sound layers of existing oil or latex finishes. The paint is also highly mildew resistant — particularly helpful in humid areas. The suggested retail price is \$17-18/gal. You can contact the company for the location of a distributor in your area and free product information. PPG has a reputation for excellence in research and development of new

formulations. We'll pass on to other readers any results reported. PPG Industries, Inc., 1 Gateway Center, Dept. OHJ, Pittsburgh, PA 15222. (412) 434-2497.

Now you have another line of colors to choose from when painting your Victorian house! Fuller-O'Brien has just introduced 70 new Victorian-inspired colors that have been endorsed by the Cape May Historic District Commission of Cape May, NJ. The colors were researched from period color charts. Unlike other period colors introduced over the past few years, this selection includes many vibrant and intense colors, especially in the blue, blue/gray, and plum shades. Available in both exterior and interior colors, the suggested retail prices begin at \$21.35/gal. for exterior alkyd, \$18.55/gal. for exterior latex, \$20.10/ gal. for interior semi-gloss, and \$15.40/ gal. for interior latex. A color palette, regularly \$3, is only \$1.50 to OHJ subscribers. Fuller-O'Brien Corp., PO Box 864, Dept. OHJ, Brunswick, GA 31520. (912) 265-7650.

As these products show, a periodinspired kitchen can be convenient, too. We picked the products below for their similarity to kitchen items seen in 1900 to 1930 house books. Many are period look-alikes, if not reproductions.

Kitchen Survivals

Whether you want a reproduction kitchen that's perfect in every detail - or just want high-quality accessories from 'the good old days' - get a copy of Cumberland General Store's Wish & Want Book. Here you'll find a period kitchen that's authentic right down to the pots, pans, and utensils. They have an impressive selection of cookware in cast iron, tinware, white enameledware, bluespeckled graniteware, and copper. Butter churns (wood or glass) and apple parers are just two of the numerous bona fide period utensils which are not only historical, but also useful and time-saving today.



Looking for an authentic touch? There is nothing as splendid as the warmth from a cookstove, and Cumberland has several models to choose from. These are not "cutesy repros"—like the kitchenware, these stoves are survivals from another era. Cast-iron stoves are available with wood or coal grates; prices begin at \$558.12. All in all, for \$3.75 ppd. the Wish & Want Book is a worthy investment. Cumberland General Store, Rt. 3, Dept. OH-83, Crossville, TN 38555. (615) 484-8481.

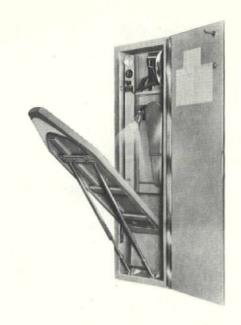


One of Cumberland's stoves.

Ironing Built-Ins

Iron-a-way makes an "ironing center" that folds down like a Murphy bed — useful and appropriate for an early 20th-century kitchen. These models, all made of solid wood, are offered with a perforated steel ironing board and your choice of recessed or surface mounting.

Depending on the model, accessories include a spotlight, electrical outlet, a timer, and various safety features. A birch door is standard on all but the E-342 model, which has a red oak, raisedpanel door (an option on the other models). The three models range in price from \$238 to \$269; an economy model, NE-342 with no electrical accessories is \$139. The company offers free literature, and will sell direct if there isn't a distributor in your area. Iron-a-way, Inc., 220 W. Jackson, Dept. OHJ, Morton, IL 61550. (309) 266-7232.



Cast-Iron Doorstops

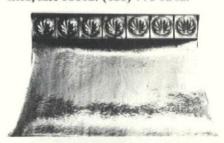


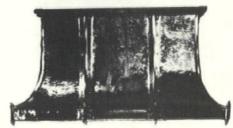
Wattle & Daub's cast-iron doorstop.

The swinging door separating the dining room and the pantry or kitchen could get to be a nuisance at times. At this point, the practical housewife would reach for a cast-iron doorstop - also a help in windy hallways. Wattle & Daub offers three turn-of-the-century reproductions: a ram and two styles of flower baskets. The cast iron has deeply sculpted details, and is painted with a semigloss white enamel. You can be creative by colorfully painting the details, or paint it flat black for an authentic look. The doorstops are 8 to 11 inches high, and \$21 each. A catalog, \$1, shows these and a limited selection of other Victorian decorative accessories. Wattle & Daub, 163 Joralemon St., Dept. OHJ, Brooklyn Heights, NY 11201. (212) 625-0079.

Copper Hoods & Friezes

A metal craftsman, Matthew Richardson, produces contemporary interpretations of turn-of-the-century brass and copper designs. His two hand-hammered copper friezes are similar to those found in many Craftsman-style houses. The sand dollar is 81/4 inches in diameter and \$18 per panel; the scallop is 10 inches in diameter and \$21 per panel. His specialty particular to kitchens is custom-made copper range hoods; prices begin at about \$500. You can call or write Mr. Richardson describing your needs - he will work from your design, create a new one, or adapt one of his existing patterns. A catalog showing his architectural metal products is \$2.50. Matthew Richardson, Box 69, Dept. OHJ, Greenfield, MA 01302. (413) 773-9242.





Two of Matthew Richardson's range hoods. The one at the top is accented by his scallop frieze.

Dumbwaiters

The oldest company in the dumbwaiter business, Sedgwick, manufactures both electric and hand-powered models; most models are custom-sized to fit your needs. The hand-powered versions range from a 5 lb. capacity, about \$1000, to a 75 lb. capacity, about \$3000. Electric models have a 25 to 500 lb. capacity, and prices begin at \$2500. These prices are for the car and lifting apparatus only: you must already have the framing. For more information about dumbwaiters, refer to OHJ Feb/81 pg. 42. Sedgwick also manufactures a line of residential elevators; prices begin at \$6000. Write for a free catalog, and the location of a distributor in your area. Sedgwick Machine Works, Inc., PO Box 630, Dept. OHJ, Poughkeepsie, NY 12602. (914) 454-5400.

Electric Stoves



Can't give up the convenience of electric cooking, but still want a period look in your kitchen? Purists may frown, but we think House of Webster has an ingenious answer - their cast-iron electric stove is a replica of a late 1800s kitchen range. The stove features four burners and an oven/broiler; in addition, the warming oven provides storage space. Closer inspection will reveal an oven timer in the coffee grinder. The price is \$960, FOB Rogers, Arkansas. The company also sells an electric oven and a microwave oven that are designed to be built into a wood, stone, or brick unit and hidden behind a cast-iron cover. The baking oven is \$495, while the microwave unit is \$950. For further details write for a catalog, \$.25, to House of Webster, PO Box 488, Hwy. 62N, Dept. OHJ, Rogers, AR 72756. (501) 636-4640.

Iceboxes

An oak icebox was a prominent feature of every turn-of-the-century kitchen. Well built and more attractive than a refrigerator, the icebox is still a sought after accessory — though few people use it to store ice. Here's an alternative to paying outrageous prices for an old one: Ritter & Son has full-size plans that enable you to make your own reproduction. The plans for a three-door icebox cost \$5.95; included are a complete materials chart and a cutting sketch.

If you already own an icebox that's in need of repair, Ritter can help you restore it to its former look. They have a selection of solid brass hardware and nameplates. A plain hinge is \$6.95, while a decorative embossed hinge is \$6.50. Matching door latches are \$9.50 each. Nameplates promoting three icebox manufacturers of the period are \$3.95 each. Their catalog is \$1, and discounts of 5% on orders over \$50 and 10% on orders over \$100 are offered. Ritter & Son Hardware, PO Box 578, Dept. OHJ, Gualala, CA 95445. (707) 884-3363.

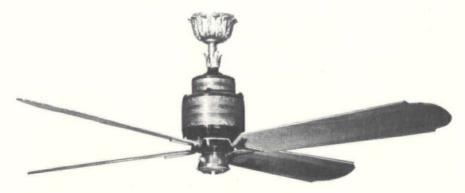
Period Ceiling Fans

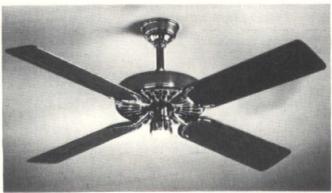
Hunter is the oldest ceiling fan manufacturer in the world, tracing its roots back to 1886. Hunter's original, modelled after their 1903 design, has a castiron motor housing (painted or brass plated) and hardwood blades (painted or stained).

The original carries a limited lifetime warranty on the motor, blades, and switches. The suggested retail prices are \$175 to \$255 for the 38-inch model, and \$225 to \$360 for the 52-inch model. Prices depend on the options you choose and sales by local retail distributors—keep an eye out for frequent advertised specials. Write for a catalog, \$1, and the address of a local distributor. Hunter Ceiling Fans, PO Box 14775, Dept. OHJ, Memphis, TN 38114. (901) 743-1360.

The Cadillac of reproduction ceiling fans is the Royal Windyne. There are two models, the regular and the supreme, which has extra brass embellishment. Both come in 39- and 53-inch sizes. They feature ¼-inch thick fan blades that are handcrafted from solid poplar — handsanded, rubbed, and waxed to produce a dark walnut or golden oak finish like that found on fine furniture.

All models are guaranteed for five years. The regular is \$297 and \$389, the supreme is \$432 and \$497; \$4.50 is requested for shipping and handling. Fans are handcrafted, not stocked, so allow three to five weeks for fabrication. Besides offering an exquisite product, this company offers friendly and helpful service. Their illustrated catalog is \$1. Royal Windyne Ltd., 1022 W. Franklin St., Dept. OHJ, Richmond, VA 23220. (804) 358-1899.





(above) The Royal Windyne "supreme."

(left) The Hunter "original."

RUSTIC

continued from page 1

forms by grouping them in separate buildings, rather than have these spaces conform to a floor plan in a single building.

IF THE FIRST CAMPS were built more or less by inspiration, in time professional architects were called in. Although the versatile guide was adequate for simple structures of the early camps, owners seeking grand hunting lodges in the Adirondack Rustic Style needed professional architectural skill. In building Santanoni in 1888, the Pruyn family turned to Robert H. Robertson; in 1891, William Seward Webb engaged the same architect to design his Forest Lodge at Nehasane Park.

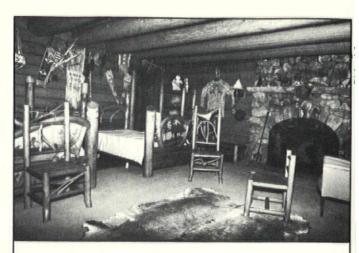
THE ARCHITECTS who designed Adirondack camps received national attention through the publication of drawings, plans, and photographs in architectural journals and popular magazines. The style became accepted as appropriate architecture for vacation homes around the country, and similar constructions appeared in the foothills of the Appalachians, the North Woods of the Great Lakes States, southern Canada, and the western slopes of the Rocky Mountains. Through the influence of the National Park Service, beginning in 1916, lodges and camps in the National Parks adopted the style. A generation of landscape architects were trained and employed in the use of rustic work.



This photo of Caesar Cone's Camp Carolina gives an excellent example of the traditional siting of the Great Camps: This structure is situated on a lakeshore against a background of forests and mountains. The camp, built in 1913, is at the northeast corner of Lake Placid, just below Mount Whiteface.

HE ADIRONDACK RUSTIC STYLE was a logistical achievement as well as an aesthetic accomplishment. The private summer camps were set in remote locations--in some cases, surrounded by tens of thousands of acres of private preserve. Access was by dirt trail after trips by stagecoach, steamer, and private railroad car.

THE CAMPS were difficult to get to, to provision, to staff, and to maintain. This very difficulty may have motivated the builders, who were rewarded less by public acclaim than



Top: This bedroom at Kamp Kill Kare shows how the Rustic Style was carried into both the interior structure of the building and the furnishings. The use of Native American artifacts is typical of this camp's interior decoration. Bottom: This living room at Eagle's Nest also features the use of peeled logs and animal-skin rugs.



by personal satisfaction in taming a hostile environment and creating a civilized mode of living exclusively by one's own means.

FROM THE EARLIEST CAMPS, the Adirondack Rustic Style is established as a unique vernacular architecture. Construction is solid and expressed precisely because building resources were limited. Form largely depended upon the lengths of available logs, the basic building blocks, which had to be either cut on site or transported across the lakes and through the surrounding forests.

THE USE OF LOG CONSTRUCTION (whether true or simulated), is one of the elements that can be considered a standard feature of the Adirondack Rustic Style. Such construction was time consuming and expensive. (The vast majority of country summer homes were of ordinary balloon-frame construction.) But the camps had logs laid up as walls, framed as trusses, used as supporting purlins for the roof, and peeled as beams and studs. Extension of log ends, coping of intersecting logs, and crossbracing of poles became decorative elements.

THE WEALTHY OWNERS who built their Adirondack camps chose logs not only for their accessibility, but also for their appropriateness to the

natural surroundings. They could have used conventional building materials and construction, but logs fitted the romantic notion of the simple life in the unspoiled wilderness. Life in the Adirondack camps was hardly simple, but elaborate pains were taken to make it seem so.

ANOTHER distinctive characteristic of the Adirondack Rustic Style is rustic work. Such work was defined by a contemporary of the period as "decoration by means of rough woodwork, the bark being left in place, or by means of uncut stones, or by such combination of these materials and devices as will cause the general appearance

of what is thought rural in character."

RUSTIC WORK had been seldom used as an integrating style. Previously, it was confined primarily to 19th-century garden gazebos and summerhouses and their furniture, or to country fences and estate gateways. But in the Adirondacks, rustic work was used to create imaginative, ornamental patterns and unique architectural embellishments. Building exteriors boasted the decorative application of peeled-bark sheathing and elaborate branch-



The Rustic Style was not confined to the use of wood. The exteriors of the service areas of Kamp Kill Kare are made of rough-hewn granite quarried on the site. The sheer massed weight of this precisely cut masonry eliminated the need for mortar. (Note the unpeeled logs used to frame the roof. At the extreme left, you can see them also used as detailing of a dormer window.)

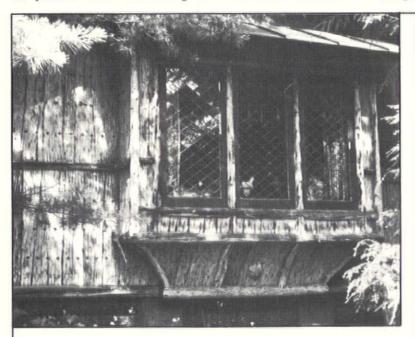
work patterns on porch railings and gable screens. Magnificent walls and monumental fireplaces of native stone combined the skills of mason and woodworker in the hands of the adept Adirondack guides.

THE RUSTIC STYLE was often continued in the interiors; designs were complete with decorative trim and imaginative woodland furniture produced on site. The furniture and accessories of the camps added to their character. Beds, cupboards, tables, chairs, and decorative pieces of peeled logs, twigs, and birch bark were works of art created by guides and caretakers over a long winter and presented to

an owner upon arrival the following summer.

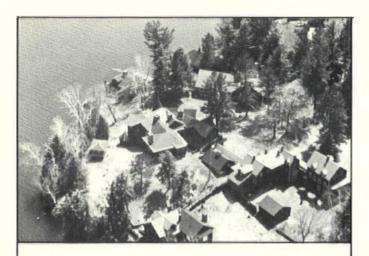
THE TRADITION of individual buildings for separate functions is another distinguishing feature of the early Adirondack Rustic camps.

Guests were generally lodged in cabins or perhaps on the second floor of the typical lakeside boathouse, separate from the camp owner's living unit. The dining room was often housed in an individual building, while the social gathering place, variously called the "casino," the game room, or the trophy lodge, was also a



These two buildings at William West Durant's Camp Pine Knot were built in 1879. The bay window (above) and the gable and fan (right) are typical features of the structures of this camp. These photos demonstrate that the Rustic Style accommodates fairly elaborate decoration and details with genuine harmony — even elegance.





Julius Bache's Wenonah Lodge was built around 1915. It eschewed the Rustic exteriors of neighboring camps, but — as you can see in this aerial view — it continued the use of massive lodges and multifunctional camp buildings. The diverse architectural styles here range from Victorian to Japanese. (That small structure at the far left is a teahouse.)

separate unit. Covered boardwalks or enclosed passageways, affording some shelter from the elements, connected the buildings.

SEPARATE BUILDINGS were particularly well suited to expansions that continued through successive summers. As camps grew with each season, they took on the appearance of small settlements. The staff quarters--kitchens, icehouses, barns, workshops, carriage houses, and storerooms--became the service complex, a self-sufficient community in some cases several miles from the main camp.

AT THE BEGINNING of the 20th century, the design trend of the camps shifted from collections of small individual buildings to an emphasis on main lodges of large size. The compound plan of separate units still continued, but there were generally fewer small buildings, and these served as bedroom facilities or guest accommodations. The sophistication of the second- or third-generation summer resident demanded more astute planning in camp building and an expansion of service facilities. Efforts were made to adapt the main lodge to a dramatic site, maintaining privacy for both owner and guests in a single structure with separate support complexes.

OT SURPRISINGLY, building construction and styles in the Adirondacks evolved along lines similar to timbered northern regions elsewhere in the world. Vernacular and native stone styles as they are found in Alpine and Scandinavian Europe, northern Russia, and Japan bear many resemblances to the Adirondack Rustic Style camp buildings.

THE TERRAIN AND WEATHER of the Adirondacks also influenced the selection of sites and orientation of the earliest buildings. Rivers and lakes served as highways, and so locations accessible by the shortest hauls were favored. Heavy snowfalls covered the ground for almost half the year and extended the spring and summer wet periods; this dictated the construction of connections between units and determined other building forms and structural details.

GENERATIONS OF EXPERIENCE taught builders to use oversized timbers to support roofs that had to support ten feet of drifted snow. Roofs

The Uncertain Future Of The Great Camps

Slowly, sometimes dramatically, the Great Camps are being lost. Neglect by inheritors along with the severe Adirondack winters have taken their toll. Sale to those with commercial interests has resulted in alterations, reckless subdivision of property, and even destruction to clear land for new buildings. Stewardship and love for the camps war with constantly increasing costs. Thus, each year decisions are reluctantly made by heirs or trustees, and the fate of one camp after another is sealed forever.

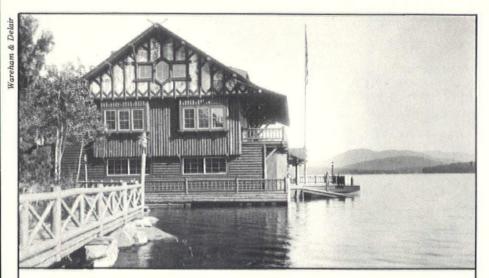
Income, inheritance, and property taxes have also hit the camp owners hard. It is increasingly difficult to pay inheritance taxes, satisfy the demands of growing numbers of heirs, and maintain a large property intact. Adirondack towns and counties are sorely pressed for tax revenues, and residents have raised property taxes — especially for 'outsiders' — to support local social programs. But many owners refuse to saddle themselves with unwieldy properties.

Owners of camps have coped with these pressures in numerous ways. Some have cut back on staff and maintenance. An honorable approach, and one with tax advantages, has been to donate the property to religious, educational, or other nonprofit organizations. Recently, this solution has become increasingly difficult, because even these institutions are less and less able to meet the costs of upkeep and operation. The other solution has

been to sell part or all of the property to the state of New York or to other private owners, often for subdivision. But subdividing the land can threaten the character of the camp itself, and sale to the state raises the possibility of the destruction of the buildings under the 'forever wild' provisions of the state constitution.

Processes for preservation of the Great Camps are complex. The first steps have been agreed on: comprehensive inventory; a constitutional amendment if required; land acquisition; the identification and development of suitable adaptive uses; the reform of real-property tax provisions. Saving historic buildings in areas of natural beauty is not an issue with established precedents. But enlightened environmental protection has existed in the Adirondacks since 1894; a tradition of benign public interest favors the reasonable accommodation of all parties.

The fate of all the remaining 35 Great Camps is precarious. Not all of them can be preserved, but the finest or most exemplary are worthy of public action. The state would do well to consider the potential of the Great Camps to house, educate, and entertain the growing number of wilderness visitors. To demolish any of the Great Camps only to replace them with institutional, modern structures would be a foolish waste — of heritage, materials, time, and money.



Adolph Lewisohn's camp, built in 1903-4, combined the Adirondack Rustic Style with German architecture. This boathouse was simulated log construction; its upper storey used birch bark to simulate stucco. (That's Mr. Lewisohn himself on the pier.)

extended far beyond exterior walls, thus precluding a buildup of ice and snow pressure against foundation walls. Logs were flattened and joined tightly, then chinked with caulking, plaster, or hemp to keep out the wind-driven rain and cold.

KNOWLEDGEABLE BUILDERS would "float" the buildings onto stones to prevent dampness and rot, and metal shields were used to discourage carpenter ants and termites. Rustic skirting prevented the entry of animals beneath the building, but allowed the free movement of air, which kept the building dry during the long spells of vacancy. This technique appears in early hotels and camps, and may have been introduced by local craftsmen as a solution for non-winterized buildings.

DREAD OF SWIFT-SPREADING FIRE inspired other features that became part of the Adirondack Rustic Style. To prevent chimney sparks from landing on a dry roof, stonework was raised well above a roof ridge; stone caps, placed on short corner posts of a chimney, trapped the sparks. This unique device became a typical detail. Smaller single-purpose structures were often separated from each other to prevent the spread of fire. This practice, first instituted by early vacationers using tents on platforms, was later translated into permanent log buildings.

THE MOST SUCCESSFUL CAMPS in the Adirondack Rustic Style followed the rule that building materials possess certain inherent qualities of the forest. This eliminated such materials as plaster, wallpaper, or paint--either inside or outside buildings. The aesthetic point depended on the natural color, figure, and grain of the wood for decorative effects. Spruce, pine, hemlock, tamarack, or balsam were the best for structure; hardwoods were too heavy to handle. Spruce was best for roofboards; pine and spruce for ceilings; pine, cypress, spruce, and gumwood for wall and panelling; and birch, beech, maple, and fir for the floors and stairs.

N LATE 19TH-CENTURY AMERICA, the camps were romanticized by popular journalists.
Log-building plans were published in "how-to" books that used Adirondack camps as models. The popularity of these buildings and their suitability to a wilderness setting stimulated similar constructions throughout North America. Later, this same style was translated into the grand lodges at Yellowstone and Glacier Parks; it became synonymous with the early architecture of the National Park Service.

ADIRONDACK RUSTIC ARCHITECTURE, however, was not adaptable to the post-Victorian need for houses that were pre-cut, low cost, and small scale. The achievement of this style was its "fit" in the natural environment. As suitable as it was for second homes in woodland settings, it was seen as unsuitable for urban and sub-

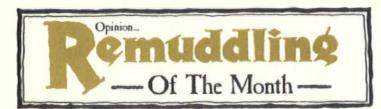
urban settings--and rightly so. Using logs or other natural materials in a residence requires self-confidence and aesthetic judgement, qualities often lacking in the tract builder or private-home builder.

BUT THE STYLE never lost its romantic appeal, and it is currently seeing a revival. As a formal rebellion against the sameness of available housing, there is renewed attraction for the traditional values, the beauty and practicality of the Rustic Style. How-to-do-it books abound, and a booming market in kits for prefabricated log houses has emerged in the United States and Canada. But the beginnings of the Rustic Style was on the remote mountain lakes of the Adirondacks, barely a decade after the Civil War.

HARVEY KAISER is the Vice President for Facilities Administration at Syracuse University. He has also been a practicing architect since 1971. As part of his effort to encourage appreciation of the Great Camps, he was recently on the Today show. The result was the adoption of stop-gap measures to protect certain of the camps until genuine legislation can be enacted.

THE AUTHOR of several books and articles, Harvey Kaiser most recently published the definitive study, *Great Camps of the Adirondacks*. This oversized book, with exceptional black and white and color photos, is both a thoughtful architectural history and a fascinating recreation of a vanished era of American life. (See our review in the December 1982 OHJ for further details.) *Great Camps of the Adirondacks* is available for \$60, plus \$2 postage, from David R. Godine Publishers, 306 Dartmouth St., Boston, MA 02116. (617) 536-0761.

IF YOU'RE INTERESTED in recreating furniture in the Rustic Style, you'll also want to know about Rustic Furniture by Sue Honaker Stephenson. This book is packed with details on both style and construction techniques, and features many striking photos and illustrations. It's available for \$9.95, plus state sales tax, from Van Nostrand Reinhold Co., Attention: Customer Services, Dept. OHJ, 132 West 50 St., New York, NY 10020. (212) 265-8700.





"It's not really clear what kind of remuddling this is. It certainly makes quite an impact on the neighborhood near historic Brookline Village."

--name withheld on request Brookline, Mass.

WHAT'S REALLY SO BAD about this house? It is eccentric, even humorous, granted-but its idiom is very Americana. The house puts us in mind of the owner-built, northeast seacoast look, with its shingles and widow's walk and portholes and nautical decorations.

BUT ALAS, it's not owner-built. It's a late-19th-century Stick Style Victorian house that was thoughtlessly remuddled by the whims of the person who bought it. That person never stopped to consider the unenduring quality of

the new work, or the relatively brief time he or she will have stewardship of the old house.

THIS MONTH'S "win-ner" is one more sad example of what can happen when a person breaks OHJ's Golden Rule No. 1: Thou shalt not destroy good old work. The house work. also shows that it is possible to be both expensive and cheap at the same time: Someone spent a lot of money to tear out construction that had lasted a century and graft on materials that will not weather a decade . - - CG



The house as it appears now is visually entertaining, right down to the lobster on its bay. But consider the loss of original windows, trim, and siding. This is a sad remuddling, not a creative statement.

The Old-House Journal

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APRIL.... A Special Issue About Roofs

Restoration and Maintenance Techniques For The Antique House

Making Wood **Venetian**

By Ron Pilling

copies than to buy new blinds from the department store.

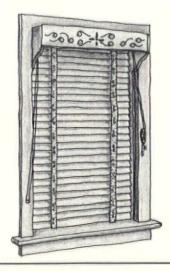
THE INVENTOR of Venetian blinds is unknown; there's reason to doubt that they have anything to do with Venice. By the 1760s, they were in general use in England and France and were becoming popular in America. As early as 1765, ads appeared in colonial newspapers for blinds. In 1789, President Washington ordered a single blind from abroad "such that draws up and closes, so that others may be made from it at home." Jefferson, too, had Venetian blinds at Monticello (also imported).

VENETIAN BLINDS remained popular throughout the Federal period. But the Victorians preferred interior shutters, and by 1860 Venetian-blind making had slipped. Shortly after the turn of the century, however, the blind was resurrected for use in Colonial Revival architecture.

ISITORS to museum houses are often surprised to find Venetian blinds in homes from the 18th and 19th centuries. supposedly 20th-century device is actually over 200 years old. The early blinds were made of wood, and the pulleys and controls were covered with decorative cornice boards.

THESE WOODEN BLINDS didn't have the baked-on gloss of their modern counterparts. They're quiet when you raise, lower, or tilt them--the sound is more like falling dominos than the clatter of a sheet-metal shop. You

don't need unusual tools or special skills to reproduce these blinds, and it's cheaper to make authentic



THE BLINDS described in this article are based on originals still hanging in the 1829 James Buchanan house in Lancaster, Pennsylvania. The wooden slats are two inches wide and about 1/8 inch thick. All the wooden parts are painted a deep, now drab-with-age green. Matching woolen brocade in a floral pattern covers the blind tapes, and the raising-lowering cords have heavy tassels on their business ends. The cords, both for tilting and raising-lowering, are secured to knobs mounted on the window frames. The pulley board at the top is covered with an ornamental cornice.

A CORD CONTROL on the left side tilts the slats in

continued on page 46

WINNERS OF OHJ's \$1,000 GRANTS



Winners of the ten \$1,000 grants were drawn by Steve Wolf (left), a good friend and occasional consultant to The Journal. He's also President of Wolf Paints. His New York City painters' and decorators' store continues to stock all the traditional finishes and tools that would have been familiar to his grandfather, who founded the company in 1869. With Steve are OHJ Editor-in-Chief Patricia Poore and Publisher Clem Labine.

The PRESERVATION GROUPS across the country are now richer by \$1,000 each. In the OHJ's grant drawing held on December 17, the following 10 winners were selected:

Preserve It Now-Fonda, N.Y.
Prospect Place Block Assn.-Brooklyn, N.Y.
Dayton Area Council of Historic Neighborhoods-Dayton, Ohio
Historic French Park Assn.-Santa Ana, Calif.
Browncroft Neighborhood Assn.Rochester, N.Y.
Lincoln County Historical SocietyLincolnton, Ga.
Historic Kansas City FoundationKansas City, Mo.
South Central Improvement Assn.Denver, Colo.
Old House Society-Bloomington, Ill.
Historic Charlotte, Inc.-Charlotte, Mich.

THE GOOD FORTUNE of these 10 groups was more than just luck. They worked hard to qualify for the grant drawing. The 10 winning groups were among 117 who participated in OHJ's 1982 Revenue-Sharing Program--and thus became eligible for the grant drawing. Under the Revenue-Sharing Program, the 117 groups made OHJ subscriptions available to their members at a special group-rate price. And the groups got to keep half of the money they collected, thereby providing addi-

tional revenue for their preservation projects.

BETWEEN the Revenue-Sharing and Grant programs, The Old-House Journal gave away \$20,000 for grass-roots preservation in 1982. Because of the popularity of the program, it's being continued into 1983.

HE REVENUE-SHARING and Grant Programs are a way for the OHJ to gain new subscribers-and at the same time give money to groups who share our goals. Like many other publications, the OHJ's main source of new subscribers is direct mail. But selling subscriptions by direct mail has become enormously expensive. So if there are groups willing to help us by selling OHJ subscriptions, we're more than happy to give them the money we'd otherwise be spending with the Postal Service.

YOUR GROUP could be a grant winner in 1983. To find out how you can raise money with our Revenue-Sharing Programand become eligible for a \$1,000 grant--call or write:

Clem Labine
Grant Program Coordinator
The Old-House Journal
69A Seventh Ave.
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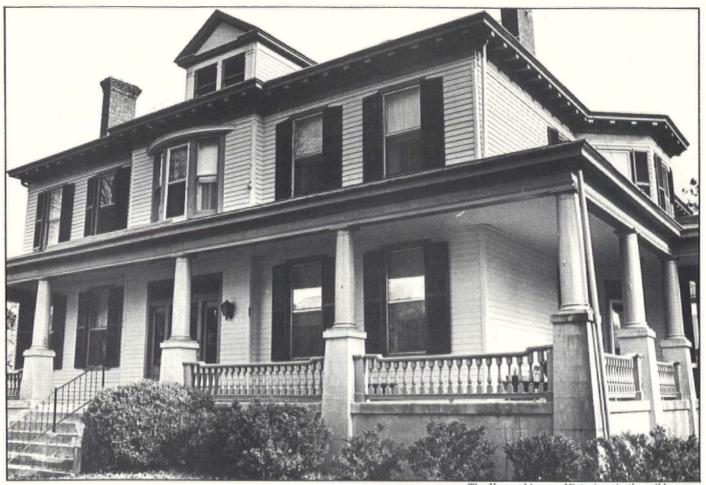
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We are happy to accept editorial contributions to The Old-House Journal. Query letters that include an outline of the proposed article are preferred. All manuscripts will be reviewed, and returned if unacceptable. However, we cannot be responsible for nonreceipt or loss — please keep copies of all materials sent.

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The Youngs' house: Victorious in the mildew war

Old-House Living...

Battling Mildew In Virginia

Preservation awareness has spread beyond the ranks of owneroccupants. Christine and Hubert Young rehabilitate old buildings in Virginia as rental properties. In this story about a Colonial Revival house, it's apparent that the Youngs restore buildings as if they were going to be living there themselves. — The Editors

AST YEAR, Hubert and Christine Young purchased a stately turn-of-the-century house in Suffolk, Virginia. The house, built about 1912, had been converted many years ago into four apartments. Fortunately, the interior was in excellent condition, with mahogany mouldings and staircase handrails throughout. The major challenge in returning the house to its pre-World War I elegance was the removal of continually reappearing exterior mildew. The previous owner had been unsuccessful in his attempts to expunge the mildew. Even with several washings and repainting, mildew continued to resurface within months after work had been done.

DESPITE THE PREVIOUS OWNER'S FAILURE at expunging the mildew, Christine was confident that

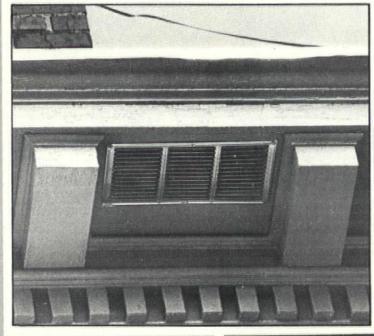
the problem could be handled. She began her work by ordering information on mildew removal. Through this research she learned that the basic method was simple and cheap, if laborintensive: a thorough washing with a strong bleach such as the common household product, Clorox.

The Solution

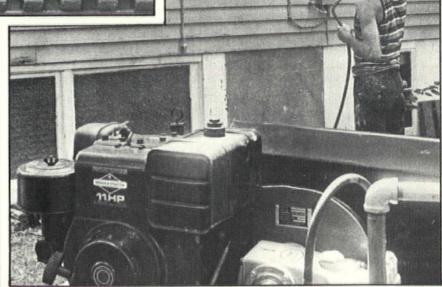
EGINNING WITH THE FASCIA TRIM, Christine had workmen wash the entire building twice with full-strength bleach, rather than any commercially mixed mildew remover. Immediately following its application, the bleach was rinsed off with clear water to prevent discoloration or damage to the wood. A pressure rinse used for this purpose also aided in removing paint loosened by preliminary scraping. (A garden hose could have been used to rinse off the bleach, but it wouldn't have removed as much of the loosened paint.)

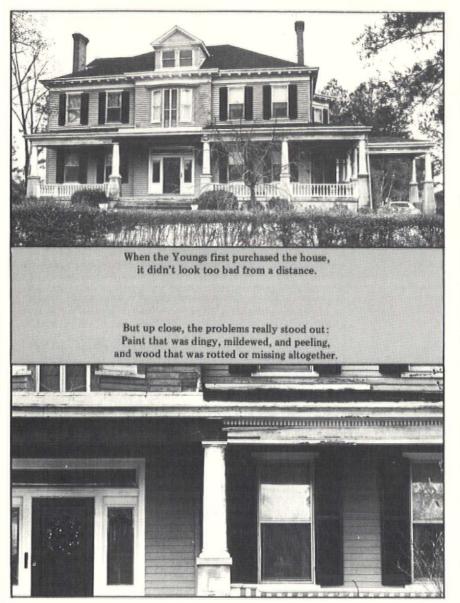
The Colonial Revival house, built about 1912, appeared abandoned and uncared for with peeling paint, mildew, and unruly foliage.





(above) Vents were installed in the soffits to increase air circulation, which helps keep the wood dry. (right) Mildew-killing bleach is being rinsed off the house with a power sprayer, which also removed loose paint.





WORKERS FOUND that most of the mildew was concentrated in the roof overhang, or soffit, where moisture collects and the sun doesn't shine. (Mildew thrives where it's wet, dark, and warmish.) To prevent further mildew in the problem areas, five aluminum circulation vents were installed. This increased air circulation in the soffits and reduced dampness buildup. A vent was also installed to ventilate the crawlspace over the carport.

SEVERAL WEEKS of extensive work to remove and double-check the removal of existing mildew followed. Deteriorated wooden elements were repaired, and peeling exterior paint was scraped. As a further mildew deterrent, the gutter system was checked for leaks, and rotted or missing sections replaced. Finally, an oil-primer was applied to the house, followed by a semi-gloss latex, mildew-resistant paint.

"I DON'T CONSIDER myself the average real estate investor. We own eighty pieces of rental property now...and restoring the homes has become a hobby of ours," says Christine.

"We take a lot of pride in the way our jobs come out." The Youngs' project attracted a lot of attention. Not only is there a strong preservation awareness in the community, but neighbors were also curious to see if the Youngs would succeed in conquering mildew where previous owners had failed.

Finishing Touches

HE HOUSE was also brought to the attention of Sherwin-Williams Paint Company. Their color-coordination office provided suggestions on proper colors for restoring the building's exterior. The suggestions even included schematic drawings with different color bases. When the Youngs purchased the house, it had been painted in primarily green tones, but for aesthetic reasons Sherwin-Williams recommended against the continued use of such colors. The house heeded to stand out from the abundant foliage surrounding it.

CHRISTINE CHOSE the color scheme most recommended by Sherwin-Williams, using "Downing Cream" for the body of the house, and "Downing Slate" for the fascia, trim, and windows. A darker cream tone was used for fascia accent and trim. Doors and shutters were painted a deep, brownish red. And, of course, all paint used was mildew-resistant.

THE REHABILITATION also included installing storm windows and doors where they wouldn't detract from the overall appearance of the house. To discourage mildew from returning, appropriate yard

from returning, appropriate yard landscaping was done to provide much-needed sunlight exposure.

BECAUSE OF THE INITIAL RESEARCH TIME and the extensive mildew work, exterior restoration costs were more than a mere repainting job. But Christine feels that the extra cost was well worth the effort. Her efforts, which took approximately two months of planning and supervision, have provided a fundamental solution to what was a recurring mildew problem. And a beautiful and stately building has been restored.

This article was written by Brenda J. Lawrence, a free-lance writer and friend of Hubert and Christine Young.

The Best Way to Replace a Tread or Riser

by Jonathan Poore and Patricia Poore Consultant: Harry Waldemar

THE OBVIOUS WAY to replace a worn-out stair tread is to cut it out and nail in a new one -- from above. That's the only repair technique you'll find in fix-it books. The trouble is, the nails all show and the new step nearly always squeaks.

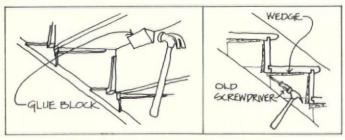
THE RIGHT WAY to replace a tread or riser is by following more closely the original construction of the staircase. For the procedure described below, you need access to the underside of the stair. An old staircase with unsalvageable treads and risers probably has plaster problems in the stair soffit (underneath): Your restoration plan should call for stair repairs to proceed during the time when deteriorated plaster is being patched or replaced under the stairs.

WE'RE DESCRIBING here the peskiest situation: replacing treads and risers in a closed-string stair with a center carriage underneath. (That is, a staircase with both ends of each tread tucked into housings in the side stringers.) It's easier to imagine working on an openstring stair, as the treads and risers are meant to go in from above, although gluing and wedging must still be done from beneath. And when there is no center carriage (unlikely in an old house), all work should be done from below ... no problem. It's easy to slide new treads and risers into their housings because there's no carriage in the way.

IF MOST OR ALL of the treads and risers need to be replaced, you'd be best off rebuilding the stair practically from scratch: Temporarily remove the center carriage, knock out old treads and risers, install and wedge new ones, then replace the carriage.

HERE'S THE STEP-BY-STEP method for replacing treads and risers when you have access to the underside. The whole procedure is shown in the Design File on the next page. Refer back to the staircase repair articles in OHJ's February and March 1982 issues if you need more of the basic information on disassembling and wedging stairs.

(1) REMOVE PLASTER from the area behind the bad treads and risers. A utility knife keeps the edges clean for easy patching, if that's your intention.



(2) REMOVE GLUE BLOCKS (if any) by tapping them smartly with a hammer to break the glue bond. Or use a chisel.

- (3) KNOCK THE WEDGES out by hammering against an old screwdriver behind each wedge. (See the illustration at the bottom of the page.)
- (4) WORKING FROM ABOVE, you'll have to remove the treads before the risers. Steps removed from above will be unsalvageable because they have to be cut to get them out.



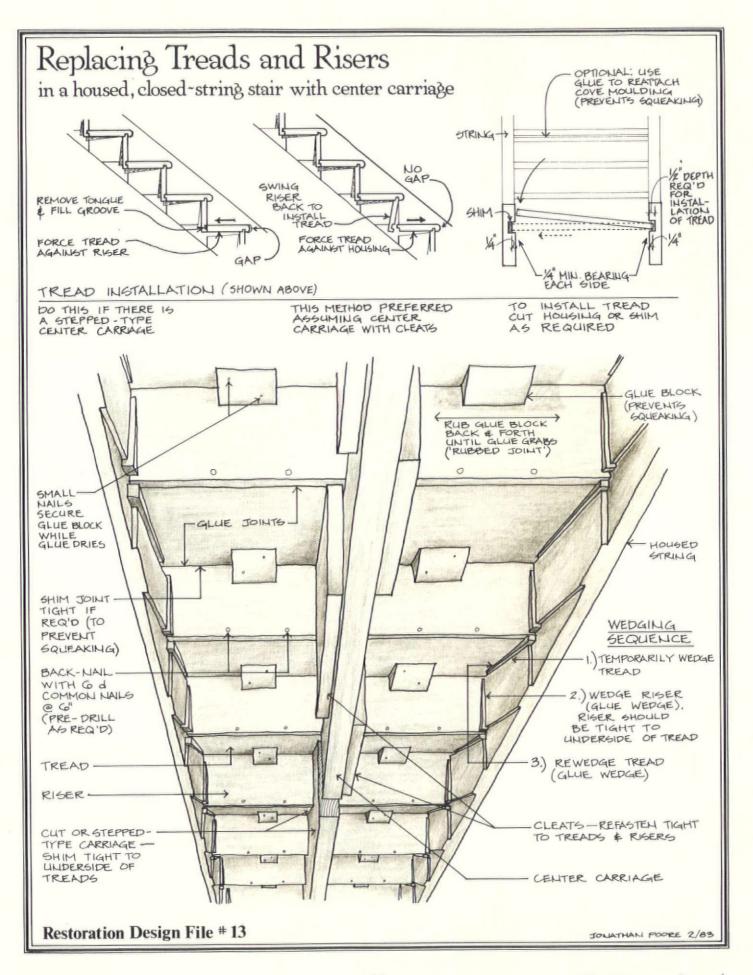
(5) NOW FOR THE NEAT TRICK: The only way to get a new tread between the closed strings and into the housings is if one housing is cut deeper than the other, and the new tread is cut a bit shorter than the old one was. This way, you can insert the tread (or riser) into the deeper housing, drop it into place, then slide it into the opposite housing. Minimum bearing in the housing should be about 1/4 inch. (It wouldn't be wise to build an entire stair this way, but it's adequate for a few replacement steps.)

THEREFORE, one housing should be 1/4 inch deep and the opposite housing 1/2 inch deep. To achieve this, most likely you'll have to chisel one housing out deeper. With later stairs, you may have to shim a housing up to 1/4 inch depth instead. The shim, a strip of wood set into the housing, acts as a stop to keep the new tread from moving side-to-side and dropping off its bearing in the string. Obviously, you cut the new tread or riser 1/2 inch longer than the distance between the strings, giving 1/4 inch bearing on each side.

(6) RISERS ARE INSERTED before treads. The tongue on the back of a milled stair-tread will interfere with its installation from topside. In the unlikely case that your center carriage is stepped, or cut to shape, you'll have to plane the tongue off and fill the groove in the riser with a strip of wood. Force such a tread back against the riser for a tight fit.

IF THE CENTER CARRIAGE is a nailing strip with individual cleats, leave the tongue on, and simply remove that cleat which bears against the riser above. Also, remove the wedges from that riser. Swing the riser backward so the tread can be inserted. Now swing the tread all the way forward in the housing. (Put some glue on the joints between treads and risers.)

- (7) TEMPORARILY WEDGE the treads (without glue). Now rewedge all the risers. Then go back and glue the tread wedges, driving them home.
- (8) ATTACH TWO OR THREE glue blocks under each step, using a rubbed glue joint and a couple of small nails in each. Glue blocks prevent squeaking later, so do use them. Make all new glue blocks and wedges; the old ones are not reusable because of the old glue in the pores. Any good cabinet glue, white or yellow, is fine.
- (9) BACK-NAIL EACH STEP, using 6d common nails toed in opposition every 6 inches through the back of the riser into the tread.



Post-Victorian DINING ROOMS

by Patricia Poore and Joni Monnich

OW DO YOU CREATE a period effect that bears the stamp of authenticity? By paying attention to the details. And the best way to absorb the details is by studying pictures of the rooms as they actually were.

LAST MONTH, the kitchen was the first room to be featured in our promised series on post-Victorian interiors. This month's tour of early-20th-century dining rooms is selected from what historians and college professors would call 'original documents' ... in other words, the photos and drawings are from old books we've been collecting for our library.

SHOWN ARE TYPICAL dining rooms of the period -- or, at least, they're typical of what was being published by the tastemakers of the day. These original ilustrations express better than words just what the rooms looked like in the transitional years after the turn of the century.

SHAPING post-Victorian American taste were two seemingly opposing forces. Romantic revivalists waxed poetic on the merits of patriotism, classical detailing, and the burgeoning Colonial Revival. At the same time, the American Arts and Crafts movement -- modernists -- touted the merits of functional, spare, 'honest' design. But, as you can see here, the result in both cases was a decorating aesthetic that was a far cry from the cluttered, ornate Victorian ideal.

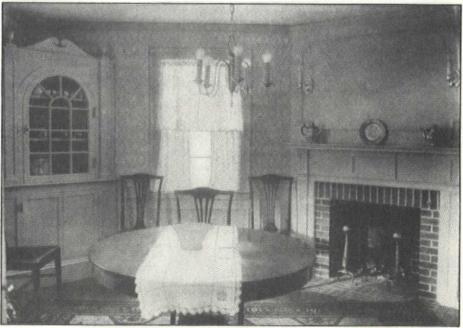
A surprisingly modern room. High panel-and-batten dado with plate rail, beamed ceiling, wood floor, and Federal Revival dining set are all typical, as is the immediately date-able ceiling fixture. Note pass-through to the kitchen, swinging door, cafe curtains, doily. All woodwork is painted with white enamel.

The cottagelike simplicity is too spare to be typical, but it illustrates the '20s obsession with utter reserve and things colonial. The tile floor hints at Spanish precedents; note rough, ochre plaster walls, plain woodwork, exposed beams. Table scarves are decorated with American Indian motifs.

A more common interpretation of Colonial style: brick fireplace with wood mantel, classical corner cupboard, geometric rug, vaguely Chippendale chairs, a very common Colonial Revival ceiling fixture and wall sconces.



from THE TREATMENT OF INTERIORS by Eugene Clute, 1926



from HOMES OF CHARACTER by R. L. Stevenson, 1923

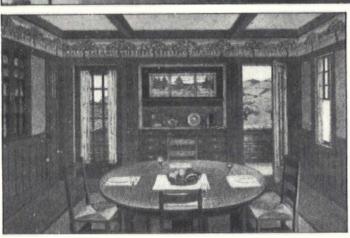


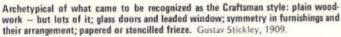
Colonial Revival influence with a mix of Queen Anne, late Victorian, and American Empire furniture. 'Walls are of a pongee color and woodwork of cream-white'; black chintz is a turn-of-the-century touch at the windows; the iron kettle is a nod to colonial days, as are the pewter pieces on the mantel. from THE HONEST HOUSE by Ruby Ross Goodnow, 1914.

A post-Victorian room with features common in new houses of the period: built-in serving cabinet with pass-through (this one stained rather than painted), Oriental rug on a polished wood floor, a scenic paper in frieze, leaded glass, and a typical ceiling fixture.

from BUNGALOWS - COTTAGES - RESIDENCES by Glenn Saxton, 1914.







'Simple dining room in a modern inexpensive city flat' typifies a decorating style influenced by the articulate American Arts and Crafts tastemakers. Note the similarity of the painting to the leaded-glass window landscape, above. from YOUR HOME AND ITS DECORATION by The Sherwin-Williams Company, 1910.





Plain plaster surfaces, waxed wood floor, high plate rail, and English suggestion in the diamond-paned doors, each adorned with only a plain white shade. from YOUR HOME AND ITS DECORATION by The Sherwin-Williams Company, 1910.

An early-20th-century interior just catching up with the European Art Nouveau and an Arts and Crafts aesthetic. The Art Nouveau is apparent in the glass shade and picture frame at left. Jacobean Revival chairs harken back to the iconography of the English Arts and Crafts movement. from BUNGALOWS by H. Saylor, 1911-13.



48 PAINT STRIPPING TIPS

TRIPPING PAINT is no fun--even if you know every trick in the book. But the following tried-and-true hints from OHJ subscribers can make a nasty job a lot easier. These tips were culled from among several hundred that we got as a result of the paint-stripping questionnaire that appeared in the September 1982 issue.

SUBSCRIBER Marion O. Redstone of Indianapolis, Ind., probably sums it up best: "Old paint is the most expensive thing in this neighborhood. It costs more per pound to get on the ground than anything else we have."

General Hints

- 1 Fit the tool or method to the job. There's no universally satisfactory paint removal process. Often, the best way to handle a paint removal task involves combining two or more methods.
- 2 Your dentist can be a good source of delicate scraping tools. See if he'll save his used curettes and other "picking" tools for you.
- 3 Don't use grocery-store paper towels for clean-up. Go to an industrial supply store and buy "shop towels." (Ask for a free sample of each brand.) Buy them by the box, or by the carton; cut them in half and get twice as many. Shop towels are strong and absorbent, and will take tough abrasive scrubbing. They are cheaper in the long run because they last longer, often can be re-used, and do the job better.
- 4 Also at an industrial supply store, buy a good pair of industrial-strength rubber gloves. Not the bulky, hard-to-manage kind, but the sleek, flexible, super-strength, long-wearing type. These will outlast any grocery store brand by weeks. . and your hands will love you for it!
- 5 'Reach' brand toothbrushes are useful for scrubbing off paint stripper residue. Most other toothbrushes will dissolve in paint remover.
- 6 If you have a lot of interior woodwork to strip, it may be easier to remove it and take it to a dip stripper. Fine hardwoods should be put ONLY in a cold tank. Softwood could be entrusted to a careful hot-tank operator. (Have him do a test piece first!)
- 7 The easiest way to strip old cast iron radiators is to disconnect them and take them to a commercial sandblaster. Stonecutting yards that do headstones usually will take on small sandblasting jobs.
- 8 If you have much overhead stripping to do, build or borrow a scaffold. It's a lot easier on your body than working from a ladder.
- 9 Extremes of heat and cold cause interior paint to crack and curl. So if you're in no hurry to strip things such as doors, leave them in an unheated garage for 18 to 24 months. Nature will do a lot of the stripping for you.
- 10 General strategy when paint layers are thick: Use heat or mechanical methods to remove the bulk of the paint. Use chemical strippers, plus sanding if needed, for final removal.

Those Perplexing Problems

11 You sometimes encounter a "mystery paint" that resists both the heat gun and chemical strippers. This could be a casein (milk) paint, calcimine, or some old "home brew" paint. Casein paints can be dissolved by scrubbing with full-strength ammonia. Calcimine can be stripped with a hot trisodium phosphate (TSP) solution. With home-brew paints, you'll have to experiment with various solvents.

- 12 Layers of old calcimine and whitewash on ceilings sometimes can be removed with just wallpaper paste. Apply a coating of old-fashioned wheat paste. The paste shrinks when it dries, and the surface tension may pull the old paint off.
- 13 Wallpaper steamers will often loosen old calcimine and other ceiling paints that resist the heat gun and chemical strippers.
- 14 Paint residue always sticks in the corners of mouldings and carvings. Here are some of the around-the-house tools that people use to clean these hard-to-reach spots: knitting needles, awls, toothpicks, crochet hooks, straight pins, dental picks, sculptors' tools, nutpicks, the filed tips of small screwdrivers, wooden dowels sharpened to a pencil point, surgeons' scalpels, X-acto knives, blunted ice picks, and "church key" can openers.
- 15 When paint is sticking in corners and grooves, it may be easier to camouflage than remove it. Take a small artist's brush and cover the paint residue with a dab of paint that matches the color of the wood.
- 16 If you've stripped all the woodwork, but don't have the energy to strip all the window sashes, try this: Paint the window sash with a semi-gloss enamel that matches the lightest tone in your woodwork. Then apply an antiquing glaze that approximates the darkest tone in the woodwork. Use a dry brush to simulate grain lines. Protect your homemade graining with a coat of matte varnish. Only the most astute observer will ever notice your trick.

Turning Up The Heat

- 17 The thicker the layer of old paint, the better a heat gun or heat plate will work.
- 18 A heat plate is best for wide, flat surfaces. The heat gun is best when heat has to be directed into curves, mouldings, carvings, and narrower flat sections.
- 19 The heat gun or heat plate is best when there's lots of stripping to be done. For a small job, chemical strippers may be more convenient and economical.
- $20\,$ An asbestos-lined, metal-topped kitchen counter pad can be taped in place to protect glass from thermal shock while using the heat gun to strip window sash.
- 21 Use a small pry bar (9" x 1½") to scrape off paint loosened by the heat gun. It works better than a putty knife, and gives more clearance between your hand and the heat source.
- 22 When using any heat source to strip paint, be aware that there's always a potential for fire. Keep a fire extinguisher at hand.

Pass The Chemicals, Please

- $23\,$ Use chemical stripper (semi-paste or liquid) on varnish and shellac. Shellac can also be dissolved with denatured alcohol. Heat methods make a mess of clear finishes.
- 24 Don't scrape off chemical stripper until it has loosened ALL the paint right down to bare wood. If the first application of stripper starts to dry out before all paint is soft, re-wet with a second application. You may have to wait 30 minutes or longer for total softening.
- 25 Retard evaporation of paint stripper solvents by covering with aluminum foil or polyethylene sheeting, such as cheap food wrap, plastic garbage bags, or plastic drop cloths. Small parts can even be allowed to soak inside polyethylene food bags.

- 26 A polypropylene parts cleaning brush (auto supply store) is great for scrubbing stripper residue out of mouldings, turnings, and the like. The polypropylene bristles are nice and stiff, and stand up to solvents better than most plastics.
- 27 To clean paint residue from a door after a heat gun has removed the bulk of the paint: Coat door with semi-paste remover while it is horizontal. Let stripper soak until paint is soft, then scrape paint-laden sludge off. While stripper residue is still wet, shift door into the upright position and stand it in a shallow tray. Starting at top of door, scrub with a rinse solution that's 50/50 denatured alcohol and lacquer thinner. Rinse solution that runs down the door can be captured in the tray and recycled.
- 28 Paint in the grooves of mouldings is usually three times thicker than the paint on flat areas. Thus it takes paint stripper three times longer to soften the paint at the bottom of grooves.
- 29 Temperature of the surrounding air is critical to efficient use of chemical strippers. Ideal temperature is 70-85 F. Above 90 F, solvents evaporate too quickly; below 60 F, the solvents act too slowly to make the effort worthwhile. Never strip outdoors in direct sunlight, or when stiff breezes might cause rapid solvent loss.
- 30 A wooden scraper is best for taking off paint remover sludge; there's less chance of gouging surfaces.
- 31 Fine woodwork and furniture should be rinsed with solvents, rather than water. It's more expensive, but the wood will be better off for it. A solution of 50% acetone (lacquer thinner) and 50% denatured alcohol works well. Paint thinner (mineral spirits) is an acceptable substitute. Note: These solvents are VERY FLAMMABLE.
- 32 To remove paint stripper from turnings: Soak a piece of heavy twine in remover and pull it back and forth like dental floss.
- 33 If you have a lot of turned balusters to strip, and have access to a lathe, consider having them dip-stripped (cold process). If there's any raised grain, it's easy to put the balusters in the lathe and polish them with fine sandpaper.
- 34 Steel wool used for scrubbing paint remover frequently gets snagged on splinters—and then rusts when a water rinse is used. Instead of steel wool, consider using bronze wool (marine supply store), green plastic scouring pads (Scotch Brite), or copper or stainless steel scrubbing pads from the grocery store.
- 35 To remove paint or varnish from a floor: Spread a thick coating of chemical stripper on a section, then cover with polyethylene sheeting. After stripper has cut through to bare wood everywhere, sprinkle sawdust liberally over the paint remover. The sawdust absorbs the sludge and makes cleanup a lot easier; just shovel the mess into plastic garbage bags. Lumberyards and millworks can be a low-cost source of sawdust in bulk.
- 36 The bronze bristle brushes sold for suede shoes make a convenient scrubbing tool for paint remover.
- 37 To remove paint flecks that remain in the pores of open-grain wood: Don't let the paint dry out after the initial stripping. Immediately scrub with a brass-bristled brush (suede brush) and lacquer thinner. (An alternative would be to scrub with liquid paint remover.)
- 38 If the preceding doesn't get the flecks out of the pores, try this:
 Mix shellac and denatured alcohol 50/50. Rub this mixture
 into the wood with a brush. Allow to dry several days, then apply
 paint remover once again. This should pull most of the paint out of
 the grain. Repeat if necessary.

The Uses Of TSP

Trisodium phosphate (TSP) is a low-cost cleaning compound that has numerous uses in finish removal. (We saw above how it can be used to wash off old calcimine paint.) The effectiveness of a TSP solution depends on its strength (how much TSP you put in) and the temperature (the hotter it is, the faster it works). TSP can be purchased at most paint supply stores; Savogran is one brand name.

39 To rinse scrub brushes and scouring pads used for picking up paint stripper residue: Dunk the scrubber in a pail of hot TSP solution (1 lb. TSP per gallon of water).

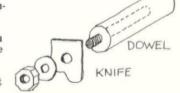
- 40 Metal parts such as grilles, hinges, and knobs can be stripped easily and economically by putting them down to soak in a hot solution of TSP (1 lb. TSP to 1 gallon of very hot water). Let the parts soak overnight. Re-heat the solution if necessary to reactivate its paint-dissolving power. Instead of TSP, you can also soak paint-encrusted metal parts in ammonia, washing soda, or lye.
- 41 Many paint strippers can be rinsed with water. You'll get even better results if you rinse with a strong solution of TSP in hot water, applied with a natural bristle brush or rag. CAUTION: Rinsing with water or TSP can raise grain, loosen veneers, and open glued joints. This procedure is best reserved for softwoods. Fine hardwoods and furniture should be rinsed with solvents, as noted in number 31.

Scrape It/Grind It

- 42 Paint that was applied to a varnished surface will sometimes release easily from the varnish under the pressure of a sharp scraper. Trial-and-error is required to see what tool works best and how much pressure to use.
- 43 Keep all scraping tools SHARP. This may require touching up with a file or grindstone every hour or so.
- 44 Paint can sometimes be removed from a marbleized or grained surface by gentle tapping with the back of a spoon. The mechanical shock separates the paint from the coating of protective varnish.
- 45 For removing paint from exterior clapboards: Some subscribers report good results with a rotary disc sander (others prefer the heat plate for this task). The most satisfactory disc sander for paint removal is one sold by Sears; it has a tungsten carbide abrasive brazed onto a metal disc. The disc tears off material at a rapid clip when it is new—making it very easy to gouge the wood. You can slow down the cutting action and make the disc easier to control by running it lightly over a cast iron waste pipe. CAUTION: Rotary disc sanders can leave swirl marks in the clapboards if not handled carefully.
- 46 To remove thick layers of paint from ornamental sheet metal (such as tin ceilings): Lightly tap the sheet metal with a small hammer. The vibration usually breaks the bond between the metal and the old paint. Some trial-and-error is needed to find out how hard to tap with the hammer.

 $47^{\rm A}$ wood chisel—frequently sharpened—makes a good scraper for exterior paint.

48 To make your own custom-contoured scraper: Order from Sears a set of 1" planer and jointer cutter bits (9HT2302); you get three knives for under \$5. File or grind a knife to the contour of your moulding. Some moulding patterns will need several different knives. To make a handle for the



knife, cut a 3-inch piece of 14" threaded rod. Take a piece of 1" dowel and drill a hole in one end so you can screw in the threaded rod. The knife already has a 14" hole in it, so it is now easily attached to the dowel with a washer and nut.

FTER PLOWING THROUGH all the responses to our survey, it's clear that there's no single "best" way to strip paint. For instance, most people love the heat gun, yet a few have found it useless for their jobs. Some swear by hand-scraping, while others find scraping too physically tiring and damaging to wood.

ALL OF THE KNOW-HOW contributed by OHJ subscribers--along with research done by the OHJ technical staff--is being compiled into a Paint Stripping Manual. This comprehensive 112-page report contains a lot of information that's never been published before. It'll be off the press in June.

Blinds continued from page 35

unison to lessen or block incoming sunlight. Two cords on the right side raise and lower the blinds. These raising-lowering cords pass over sets of pulleys mounted on a board at the top of the window. As with today's blinds, the cords descend through oblong holes in every slat and are secured beneath the bottom slat. The tape, suspended from the top slat, is cloth faced with a decorative ribbon.

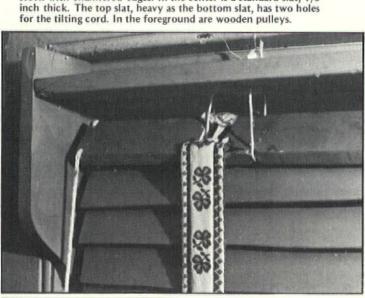
MY REPRODUCTION required slats 29 inches long. Sources of wood 1/8 inch thick, in lengths over two feet, are few and far between today Good quality plywood is available, faced with both mahogany and basswood. But plywood creates problems familiar to anyone who has ever worked with laminates. It splits easily when sawn (especially when it's very thin), and it tends to twist and warp. Your choice of finishes is limited, too; only paint will hide the raw edges of the plywood.

IT'S NOT DIFFICULT, however, to cut off the thin strips you'll need from a large solid block. Locally, you can find 5/4-inch stock at yards that sell hardwoods. You can also get turning squares from mail-order woodworking suppliers. Both Craftsman Lumber Company and Constantine & Son sell such blocks through the mail.* The cost is quite reasonable: Slats of cherry or maple, cut from a two-inch block, 36 inches long, are less than 25¢ apiece.

THESE BLOCKS of solid wood can be sliced down on a table saw. You'll be cutting some awfully thin slices--if you don't have much experience with the saw, you should take the wood to a cabinetmaking or woodworking shop and have them cut it for you. I purchased a wood block at a specialty lumber store and took it to a millwork shop, where they charged me \$10 to cut off the 30 slats I needed.

* Craftsman Lumber Company, Main St., Dept. OHJ, Groton, MA 01450, (617) 448-6336. Leaflet and price list, \$.50; Constantine & Son, 2050 Eastchester Road, Dept. OHJ, Bronx, NY 10461, (212) 792-1600. Catalog, \$1.

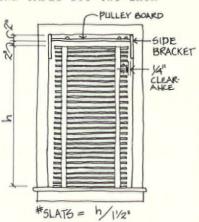
Left: The tape on the left side of the blinds is glued and stapled to the top slat. The tilting cord enters this slat through the top and is knotted under the slat. Right: The bottom slat is heavy stock with chamfered edges. In the center is a standard slat, 1/8



HEN DETERMINING the length of the slats, allow for room on both sides of the blinds -- the cords are heavy and must be tied off on either side of the frame. My own blinds use slats 29 inches long to hang in a window 31 inches wide from frame to frame. The glass is 27 inches wide, so the slats have a one-inch clearance on either side and can still block incoming light. This inch also provides a little clearance (4 inch) between the top slats and the side bracket (which is 3/4 inch thick) on both sides.

STANDARD VENETIAN-BLIND TAPES for two-inchwide slats space

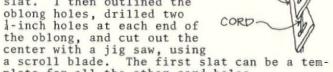
the slats 11 inches apart. Allow two inches for the pulley board and pulleys as well as two inches below the pulley board so the top slat can tilt. Figure that the bottom slat will just clear the sill. My window is 53 inches tall. Subtract the four inches for the top and divide the remainder by 11 (the distance between the slats). This gives



you the number of slats required--in this particular case, 32.

YOU'LL HAVE TO CUT two one-inch-long, oblong holes, one at each end of the slat, about six inches in from the end. The special shape is

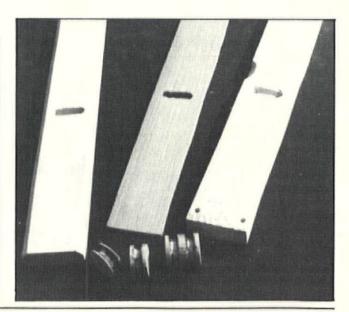
necessary to accommodate the raising-lowering cords while still allowing the slats to tilt. I marked the location of the holes on the first I then outlined the slat. oblong holes, drilled two 4-inch holes at each end of



SLOT

SLATS

plate for all the other cord holes.



BOTH THE TOP AND BOTTOM SLATS have to be extra thick--about 3/4 inch. The top supports all the other slats and so must be rigid enough to control tilting. The bottom should be sufficiently heavy to pull the blind down when the raising-lowering cords are released. These two slats were cut from pine shelving stock and drilled with oblong holes like the others.

CHAMFER THE BOTTOM SLAT with a plane, router, or spokeshave for a finished appearance. Additional holes must be drilled in one end of the top slat for the tilting cords (see the photos at the bottom of page 46). Smoothly rounded grooves can be cut into the slat at the two places where the hanging cords will wrap around it.

AFTER SANDING, I painted the slats with two coats of paint, sanded again, and finally finished with a coat of linseed oil and turpentine. This gave the colors some depth and imitated the patina on the Buchanan blinds.

AT THIS POINT, each slat may have a slight curve from end to end. To eliminate this

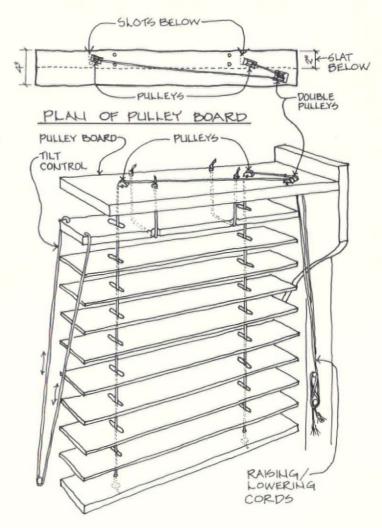
curve, group the slats into piles of six and rest them between sawhorses, with the ends supported and the middle span curve-up. This makes it easy to weight the piles in the middle. I used gallon cans of paint, hung by cords from the piles of slats. After a couple of days, the slats were relatively straight.



AISING-LOWERING CORDS pass over a series of pulleys mounted in a board at the top of the blind assembly. The entire top assembly consists of the pulley board and pulleys, the two side brackets, and the cornice. Common pine was used for the pulley board and brackets. Measure the width of the window, frame to frame. Then subtract the thickness of the side brackets and you have the correct length for the pulley board. Mine was four inches wide and 29½ inches long.

A BLIND WITH TWO TAPES requires one double pulley and two single pulleys. The raising-lowering cords pass through the pulley board from below through a hole near the double pulley. They go over that pulley and each one runs to a single pulley. They then go back down through the board and all the oblong holes in the slats.

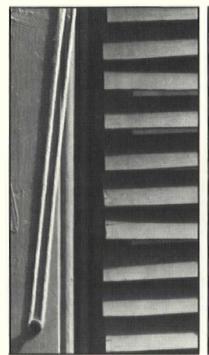
MY THREE PULLEYS were carved out of sections from a one-inch dowel. The grooves are 3/16 inch deep--I dug them out with a knife and smoothed them with a half-PULLEYround file. (If you don't want to go through all this effort, you can buy metal pulleys in a hardware store.) I used two-inch nails as axles when I mounted the pulleys in the board. I cut off the head and bent the other end 90 degrees. The I put it through the pulley, bent the other end, and "stapled" the pulley to the board.

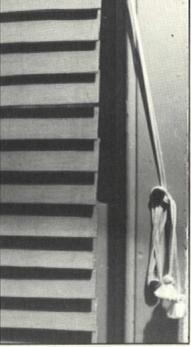


THE PLACEMENT of the pulleys determines how smoothly the blinds will work, so check the pulley alignment before you cut the holes in the pulley board. Then mark the pulley board where the holes will be cut. Allow some clearance for both the pulley and the cord that will travel on it.

THE DOUBLE PULLEY is mounted in a hole toward the front of the board on the right end. this way, the raising-lowering cords will not interfere with the slats, which hang toward the back. Each single pulley is mounted in a hole in the board directly over the point where the slats' oblong holes will fall. (The cords cross the board diagonally.) Attach the pulley board to its side brackets, leaving a space at the top large enough to allow the pulleys and the cords to move smoothly.

THE ASSEMBLY is then nailed to the top of the window, into the frame on each side. The first slat to go in is the top slat. It hangs first slat to go in is the top slat. in a loop of cord on each end, and the cord passes around it (right where you cut the grooves for it), and goes through the pulley board, where it is knotted. Curiously, standard Venetian-blind cord didn't work very well here; the wooden slats never moved easily in it. I used common sisal twine instead, and it has proven to be strong enough to support the blinds, yet smooth enough to allow the slats to tilt. Whatever material you use, be sure



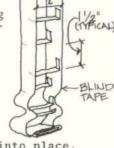


In the close shots above, you can see how the tilting cord (left) and the raising-lowering cords (right) are secured to knobs mounted in the frame. The large photo at the right shows the finished product, which now resides comfortably in Ron Pilling's home.

the weight of the blind assembly doesn't exceed the rated strength of the cord.

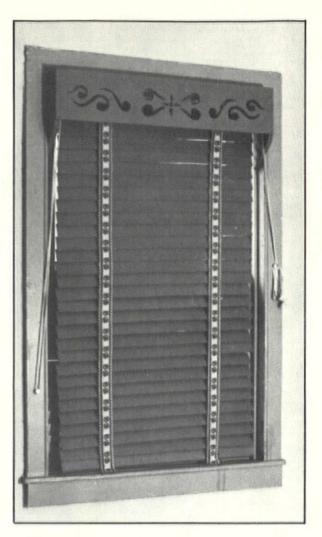
STANDARD VENETIAN-BLIND TAPE is readily available; the one used here is cotton, for two-

Check the Yellow inch slats. Pages under "Window Shades-Equipment & Supplies"; you should have no trouble finding the tape. (It's very inexpensive.) Brocade ribbon, found in a retail sewing store, was sewn directly onto the front of the tape. After being cut to accommodate the correct number of slats, the tape was then glued and stapled to the top slat at the points where the oblong holes were cut. All the slats were then slid into place.



ALL THAT REMAINS is to string the blinds, mount the frame hooks, and install the cornice. The tilting cord goes on the left side first. You can use a piece of standard Venetian-blind cord (or any suitable cord from a sewing store). The length will vary, depending on the length of your window. (My cord was about five feet long.) Each cord passes through the top of the holes at the left end of the top slat and is knotted under the slat.

A SINGLE KNOB is mounted on the left side of the window frame, so that when the tilting cord is slipped around it, the cord will be taut. Use two raising-lowering cords, each at least twice as long as the window is tall. String them according to the diagram, passing through the pulley board, over the pulleys, and back down through all the oblong holes.



Each cord is knotted under the bottom slat (with a washer, if necessary).

THE RAISING-LOWERING CORDS are secured like boat lines to a pair of knobs mounted about six inches apart on the right side of the win-These cords must be pulled simuldow frame. taneously and evenly to raise and lower the blinds. Test both the raising-lowering function and the tilting. When you're satisfied that both work smoothly, cover the mechanism by nailing the cornice board to the side brackets and pulley board.

IT'S NO WONDER manufacturers stuck with the same design for so long -- they work perfectly With the introduction of springs, clamps, and sheet metal to blind making, companies came up with the "improved" versions you buy today. You know the kind--everyone had them in the '50s. After a while, they raise faster on one side than the other, and you have to jerk the string in seven different directions to get the mechanism released. Also, the toothed spring clamps have a definite tendency to give way at about two in the morning: The slats clatter down, sounding like a truckload of Your wooden downspouts on a rough road. blinds will never do this as long as their cords are tied securely to the knobs. dent Buchanan's blinds never disturbed his sleep, mine haven't awakened me, and yours won't bother you.

March 1983

Ask OHJ

Restoring Graining

FORTUNATELY, the wood graining in our 1865 home has never been painted over. However, over the years it has accumulated a lot of nicks and dirt. How can we preserve the unique hand graining but still get it clean?

-- Mrs. K. Schutz Canton, MS

CCASIONALLY, wood graining was covered with a protective coat of shellac (as opposed to varnish). If this is your situation, you can use denatured alcohol to remove the dirty shellac without destroying the graining. Start with a small test patch in an unobtrusive area. If the graining wasn't shellacked, you will have to adopt the standard do-ityourselfer's approach: Start with the least severe treatment and work your way up. Begin by scrubbing with soap and water (again, always start with a test patch). If this isn't enough, you may be able to brighten the finish by wiping lightly with turpentine and fine steel wool--just go slowly. Patented "finish revivers" are no good for graining because they work by partially dissolving the finish; they also tend to contain additional stains or

AS FOR REPAIRING SCRATCHES, touching them up by hand is the only solution. Paint in the damaged areas with an appropriately colored stain. When you're finished, protect the graining with a good clear shellac, which can be easily maintained without harming the graining.

Restoration Vs. Insulation

MY WIFE AND I bought a house that was built in 1896. Many years ago, the clapboards were sided over with asbestos shingles. We're considering removing the shingles and restoring the original appearance of the house. The problem is that the exterior walls aren't insulated. Would it be better to leave the ugly shingles for whatever added insulation they may give, or remove them for better appearance and less insulation? (We'd prefer not to use any of the foam or blown insulation currently available.) Any suggestions?

-- Charles K. Davis Rhinecliff, NY

ASBESTOS SHINGLES have a negligible insulating value. If the clapboard underneath is sound, you can safely remove the shingles without a significant loss of insulation. Actually, most of the heat loss in any house is through the roof. If you increase the

amount of insulation in your attic, you'll more than make up for any lack of insulation in your walls. Eight to ten inches is the recommended thickness of fiberglass for attics in your climate. (If your house's previous owners didn't reinsulate in the last few years, the odds are you could use the additional insulation.)

The Gilt Complex

RECENTLY PURCHASED two old carved doors for my house. They were painted with black paint, which stripped off beautifully. Underneath, in some areas of the carving, I found a hard white substance with gold on it. My contractor thinks it's a thin layer of plaster of paris, applied to make the wood smooth. Do you know what it is?

-- Mrs. R. Schelgilmilch Walton, IN

RADITIONAL GILDING TECHNIQUES call for preparing the surface with gesso before applying the gilt. Gesso has several different formulas, but basically it's composed of whiting (finely powdered calcium carbonate) or plaster of paris mixed in a binder made from animal skins (similar to hide glue). This is heated and brushed onto the wood in many thin

layers. It fills the pores of the wood and smoothes it to receive the gold leaf. If the gold on your doors is real gold leaf and not gold paint, it was applied to the gesso using the same animal glue size and was then burnished for a smooth finish.

IT SOUNDS AS IF the gilding on your doors is beyond saving. Now you have to decide whether you want to regild (or hire a gilder to apply the leaf), use gold paint instead, or simply stick to a plain, painted finish.

General interest questions from subscribers will be answered in print. The Editors can't promise to reply to all questions personally—but we try. Send your questions with sketches or photos to Questions Editor, The Old-House Journal, 69A Seventh Avenue, Brooklyn, NY 11217.

Seus News

by Joni Monnich

News From The Products Grapevine

Gas Mantles

A subscriber recently wrote to us about his adventures in trying to find the right mantle for his gas lamp. While tie-on mantles were sold by several sources, he found it was almost impossible to buy the pre-formed type. Finally, he came across Humphrey Products, manufacturers of gas lamps and replacement parts for 80 years. The company now stocks contemporary indoor and outdoor propane gas lighting fixtures. But their replacement parts may fit an old fixture, especially if it was made originally by Humphrey.

Mantles are formed by a chemical ash which emits light when heated. The light given off by a mantle is comparable to a 50-watt bulb, far greater than that of a

plain gas flame. But, pre-formed gas mantles can be damaged if jarred so they're recommended only for stationary exterior and interior lighting. (Tie-on mantles are still used to-day for camping lanterns.) A pre-formed mantle is



Pre-formed gas mantle

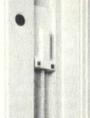
\$1.35; the tie-on mantle is \$.57. Replacement nozzles are also offered. For a free brochure, write to Humphrey Products, PO Box 2008, Dept. OHJ, Kalamazoo, MI 49003. (616) 381-5500.

Infiltration Stoppers

Some of the cold-air infiltration common with double-hung windows comes through the hole around the sash-cord pulley. A new device called the *Pulley Seal* is an inexpensive and seemingly effective brown or white plastic cap. Designed to fit over the sash with an adhesive gasket and screws, it helps to prevent air leakage.

The *Pulley Seal* we tried at the OHJ office was unobtrusive, easy to install, and the only interference with window operation was that the window open-

ing was reduced a few inches. It can be used with sash cord or chain. Without an army of energy technicians and computers, it'd be impossible to report exactly how significant the energy savings are. But at



\$1.50 per pair, they're a low-cost and probably worthwhile investment — after weatherstripping. For free information, write to Anderson Pulley Seals Inc., 920 W. 53rd St., Dept. OHJ, Minneapolis, MN 55419. (612) 827-1117.

An Anglo-Japanese Room Setting

Pictured here is the exciting new Eastlake frieze and its complementary dado from Bradbury and Bradbury Wallpapers. (This is the parlor of the Camron-Stanford House in Oakland, Calif., c. 1876.) The frieze is an accurate reproduction of an 1870s Christopher Dresser design; both dado and frieze reflect the period's Anglo-Japanese style. The room setting can be completed with Claire's Willow, a delicate reduction of Bradbury's familiar Willow pattern. The frieze is 18 inches wide and the dado is 27 inches high; each is sold for \$12 per yard. The new Claire's Willow is \$24 per roll, a roll being 30 inches wide and 15 feet long.

These papers and other patterns offered by Bradbury and Bradbury are all beautifully hand-printed reproductions or adaptations of wallpapers from the late 1800s. Product literature, \$1, includes a brochure illustrating many of their designs and a new color brochure featuring the Peacock frieze, introduced this past fall. Specify the Eastlake Room Setting when requesting information about the patterns shown here. Bradbury & Bradbury Wallpapers, PO Box 155, Dept. OHJ, Benicia, CA 94510. (707) 746-1900.

The Eastlake Room Setting (Claire's Willow isn't shown here). The frieze is sold with extra bands of pattern which can be used creatively in the cove moulding, ceiling, border, etc.



Courtesy of Helga Photo Studio

Ersatz Etched

Armour Products has "etched glass" patterns which can be used to simulate sandblasted or acid-etched glass. Not as impressive as patterns executed with traditional techniques, Armour Etch can nonetheless allow you to decorate new glass very inexpensively. The selection of period-feeling patterns, unfortunately, is very limited, but a few are appropriate. And it's not advisable to use this product on old or original glass because it's not reversible.

Here's how it works: A pattern outlined with wax is rubbed onto clean glass, the area is masked off, and then "etching cream" is applied. After waiting three to five minutes, you wash off the cream. Areas not masked or waxcoated have been lightly etched. Available in kit form or as individual sheets, patterns range from small corners (about 11/2-2 inches long) to larger corners (about 7 inches in length) to a 24 in. x 30 in. rectangle. Kits are \$3.25 each, individual patterns are \$1.19 to \$2.19 each. A catalog showing patterns and supplies is free. Armour Products, PO Box 56, Dept. OHJ, Midland Park, NJ 07432. (201) 652-8895.

Discount Wallpaper

If you've admired reproduction wall-papers, but been surprised at the price tags, Post Wallcovering might be the alternative source you've been looking for. They stock major manufacturers' patterns at a discount of 27% off the suggested retail price. (The discount is somewhat less for small orders.) There is no delivery charge or minimum order, and no sales tax (except for Michigan residents).

Speaking frankly, we were skeptical, so we did a test order. We selected the Biltmore Filler — Shrimp Color from Schumacher's Victorian Collection, a not readily-stocked paper with which we were quite familiar. The paper was delivered to us in ten days and matched a roll purchased from a Schumacher distributor at \$16.15 per roll (plus N.Y.C. sales tax). The cost of our roll from Post was just \$11.64 postpaid — plus a \$.50 service charge per roll for orders under 24 rolls.

This company claims they'll find you anything you want, so there's no catalog. They will send a free information sheet. You should call toll-free to check on the pattern you require; be sure to have the manufacturer's name and the complete name of the paper. Post Wallcovering Distributors, Inc., 2065 Franklin, Dept. OHJ, Bloomfield Hills, MI 48013. (800) 521-0650 or in Mich. (800) 482-2488.

Sowing A Period Garden

This is the time of the year to make landscaping and gardening plans. We've researched sources for hard-to-find herbs and plants to help you turn your plans into reality. The following companies sell through the mail, and many will even offer helpful gardening advice.

George W. Park Seed Co., PO Box 31, Dept. OHJ, Greenwood, SC 29647. (803) 374-3341. W. Atlee Burpee Co., 300 Park Ave., Dept. OHJ, Warminster, PA 18991. These are two of the largest mail-order suppliers in the country. G.W. Park even has wildflower seeds; you can purchase old-time plants like wisteria from Burpees. Both offer free seasonal catalogs.

Faith Mountain Herbs, PO Box 199, Dept OHJ, Sperryville, VA 22740. (703) 987-8824. This company specializes in herb seeds. Another item of special interest is their *Everlasting Flowers*—flowers which have been grown ever since the 1800s for use in dried flower arrangements. Classes on period gardening and flower arranging are offered.

Bittersweet Hill Nurseries, Rt. 424 & Governor's Bridge Rd., Dept. OHJ, Davidsonville, MD 21035. (301) 798-0231. In addition to plantings and herbs common to the 18th and 19th centuries, they'll be happy to give you advice on which plants are appropriate for your garden. Free listing of plants and herbs.

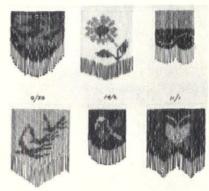
Shades And Fringe

Esther Rister of Yestershades employs the traditional techniques of the early 1900s to create lampshades reminiscent of 1900 to 1930 designs. Fine materials like satin, velvet, and antique lace are hand-sewn to metal frames in period color combinations. About forty different designs are stocked, but Ms. Rister will gladly custom design a shade for you. In addition to the more elaborate shades, simple silk shades are also offered. Prices range from \$45 to \$395. Shades can be purchased with or without a base, all of which can be seen in a free brochure. Yestershades, 3534 S.E. Hawthorne, Dept. OHJ, Portland, OR 97214. (503) 238-5755.



(left) Tulip shade — \$85. (right) Small Tiffany shade — \$68.

After reading the article about recovering silk lampshades in the March 1982 OHJ, many of our subscribers contacted us seeking an American source for period fringe. We finally found one! Rumplestiltskin Designs is the major supplier of fringe to period-style lampshade designers, and they're willing to fill retail orders from OHJ subscribers. Their combination glass and plastic fringe is \$30 per yard. Another type is all glass and costs \$35 to \$50 per yard. They also stock 11 in, x 14 in, embroidered silk panels which can be used as replacement panels for old shades. The cost of each panel is \$17. No brochure is offered, but if you send \$1 and a selfaddressed stamped envelope, they'll supply color photographs and a current price list. Rumplestiltskin Designs, 8967 David Avenue, Dept. OHJ, Los Angeles, CA 90034. (213) 839-4747.



Rumplestiltskin's glass fringe.

Remuddling —Of The Month—

THE PERSON who submitted this photograph commented, "The one on the right has been sadly remuddled. The wooden clapboard has been covered with permastone and aluminum siding, the windows and doors have all been 'modernized,' a concrete and wrought iron porch has been added ... Sad, isn't it?" The house on the right is a typical remuddling, one that arises from laziness and short-sighted economizing: 'Make your home maintenance free!'

HOWEVER, from our point of view, the house on the left has suffered as grievously as its neighbor. A handsome, early 20th-century Homestead House was 'Mother Goosed' into some kind of pseudo-Italianate, quasi-Classical Revival building. Someone spent a good deal of money to make this house conform to a fantasy of old-fashioned beauty. (Round-head windows are not cheap.)

THE APPEARANCE of the house is now completely inappropriate to its style, structure, and history. In fact, there's no historical basis whatsoever for a house that looks like this. A house's style is more than the sum of its

parts. Arbitrarily chopping off old elements and grafting on new ones does not give a house a new style; it just diminishes the one true style of the house. If people want to build a house that expresses their dream, more power to them. But it's a mistake to force an old house onto a Procrustean bed of one's own personal tastes.

THE PHOTOGRAPH presents two strong arguments in defense of Golden Rule Number Two: To thine own style be true.

--Cole Gagne

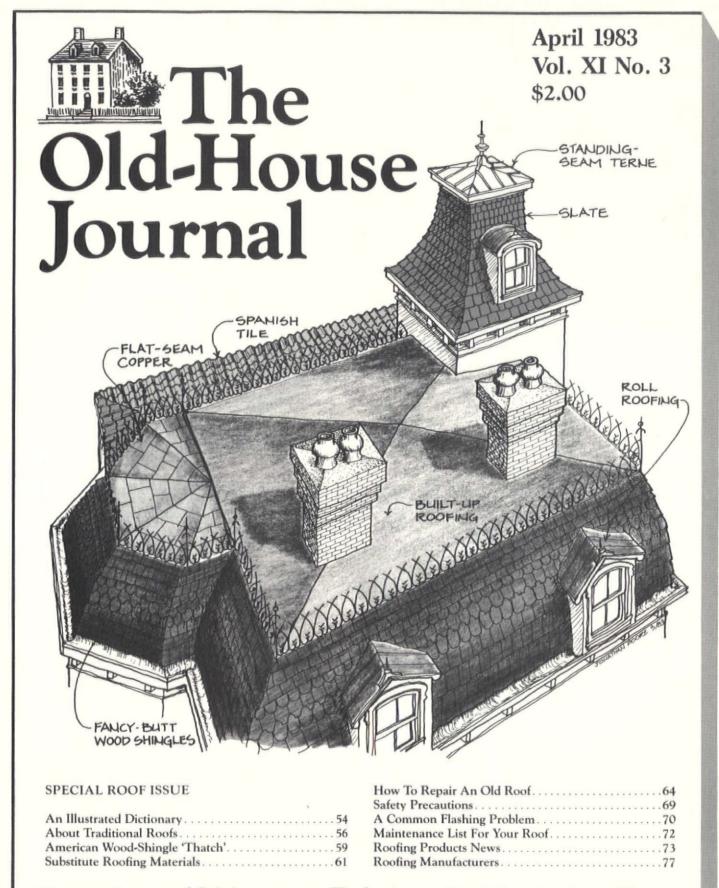


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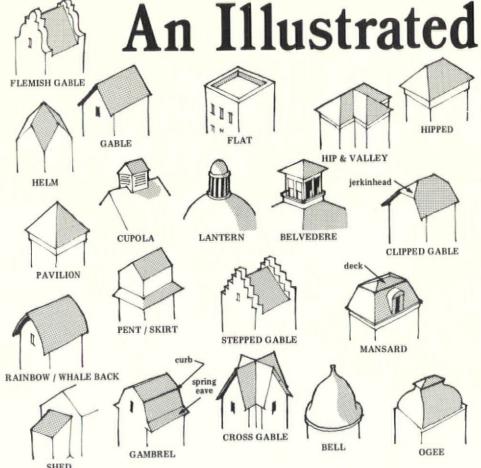
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We are happy to accept editorial contributions to The Old-House Journal. Query letters that include an outline of the proposed article are preferred. All manuscripts will be reviewed, and returned if unacceptable. However, we cannot be responsible for nonreceipt or loss — please keep copies of all materials sent.

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BUILT-UP ROOFING (BUR) — Most often used on nearly-flat roofs. Successive layers (plies) of roofing felt and moppings of hot tar or asphalt are built up and topped by a mineral-surfaced cap sheet or gravel embedded in asphalt. It is easily patched, and a good job can last 50 years. Also called a hot-tar roof, composition roofing, or multiple-ply roofing.

BUTT — The bottom edge of a shingle at the widest point of taper. The butt end is the exposed part of the shingle.

EXPOSURE — The length of a shingle, slate, or tile which is exposed to the weather, or not covered by the next course above. It's expressed in inches, i.e., "7½-inch exposure" means the same thing as "7½ inches to the weather."

FELT — Also called asphalt-impregnated felt, rag felt, roofing felt, felt paper, and sheathing felt, this is tar-, asphalt-, or chemical-impregnated felt that is laid over the sheathing and under the roof covering to act as a dampness barrier, minor insulator, and cushion. This term is often also applied to roll roofing.

FLASHING — An impervious material, separate from the main roof covering, placed on a roof to prevent water penetration or to provide water drainage. Flashing is usually metal — copper, tin, galvanized steel, or aluminum. Flashing for use with built-up or roll roofing is simply heavier-weight felt. Flashed areas include those around projections, such as chimneys and vents, and wherever two surfaces having different slopes meet, such as valleys, hips, & roof curbs.

HIP — The external angle formed by the junction of two sloping sides of a roof.

LAP — In shingling, that amount overlaying the shingle two courses below. Also called headlap.

LOAD — The weight, force, or system of forces

to be carried by a roof. Roof structure must be designed to take both dead and live loads. Dead loads include sheathing and roof-covering material; live loads include snow and wind.

RED ROSIN PAPER — A cheap, heavy, durable building paper laid under metal roofing to provide a low-friction surface for movement due to expansion and contraction of the metal with temperature changes.

ROLL ROOFING — A relatively inexpensive asphaltic-felt roofing available in roll form. It is made by saturating felt with asphalt, then coating the saturated felt with a fine mineral, fiberglass, or asbestos. Granule-surfaced material can be used as the cap sheet for built-up roofing.

SHAKE — Current meaning is a hand-split wood shingle.

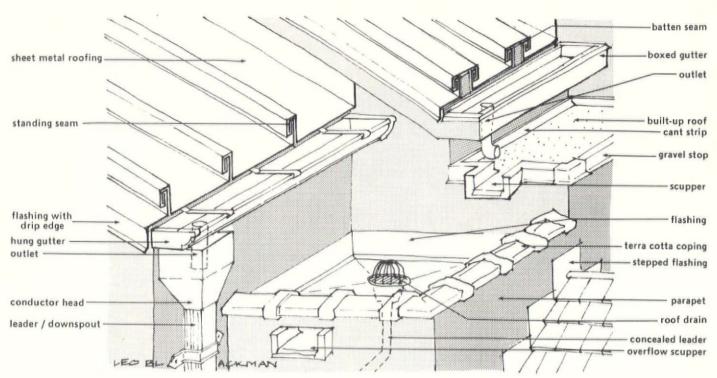
SHINGLE — A roofing unit of wood, asphaltic material, slate, tile, concrete, etc., cut to stock lengths and sold in dimensional or random widths. Thickness is measured at the butt.

SLOPE (PITCH) — The angle of inclination the roof makes with the horizontal. It is usually described in terms of vertical rise (in inches) to each foot of horizontal run, as in "8 in 1"; or it can be described in terms of the total rise (height) of the roof to its total span, as in "1/4 pitch."

SQUARE — The standard market measure for roofing materials. One square equals the number of slates, shingles, or tiles needed to cover 100 sq.ft. of plain roof surface when laid with the customary lap.

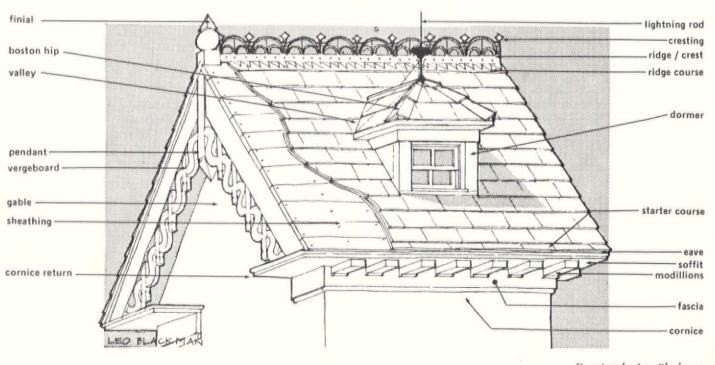
VALLEY—The depressed (inside) angle formed by the intersection of two inclined sides of a roof. In an open valley, the metal flashing is exposed. In a closed valley, the metal flashing is covered.

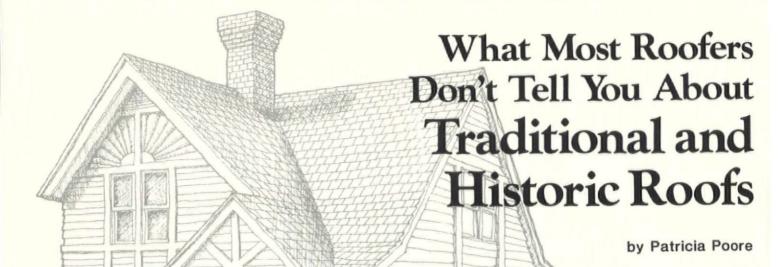
Dictionary Of Roofing



Drainage Systems

Parts Of A Roof





WHEN THE KITCHEN LINOLEUM is shot or an appliance wears out, you go to a showroom and pick out a new one. Not so with roofing. Manufacturers market their products to the trade, not to homeowners. If you're not a roofer, you probably don't know what all your options are, or how to compare cost and appearance of different materials. This issue introduces roofing repair and replacement options to homeowners, the people who have to pay the bill and live with the roof. Below, a couple of things most roofers won't tell you....

About Real Costs

OLD-HOUSE OWNERS tend to look at things longterm. Roofing is a good place to apply that kind of thinking. Look at the chart: The more you pay for a roof, the longer it lasts and, generally, the less maintenance it needs.

WE HAVEN'T IGNORED the magnitude of the costs involved in roofing, however. We stress maintenance and do-it-yourself repairs in this issue, so that total roof replacement can be forestalled. It is indeed very expensive to completely replace a slate, clay tile, or copper roof, especially on a large old house. Sometimes, despite best intentions, the cost is prohibitive for an individual owner.

THERE'S NO simple answer to the bottom-line cost dilemma. But we can offer a couple of contingency plans that take more imagination than the average roofer has to sell. First, three things to keep in mind:

- A special roof is a major architectural feature of an old house. You could be bitterly disappointed in the way your building looks if you replace the roof with an inferior or vastly different material.
- \bullet A high quality, architecturally pleasing roof adds to the real value of your home.
- A high quality job with good materials will last far longer and require less care than a job which costs less up front.

About Contingency Plans

TWO ALTERNATIVES to immediate and complete replacement have worked for some homeowners and preservationists around the country.

- YOU CAN CREATE a Roof Replacement Fund, saving up while you maintain and repair your old roof for as long as you can. A checklist on p. 72 will help you find trouble spots. If problems are still repairable, you can refer to the repair article on page 64. Another temporary measure is to cover the old roof with inexpensive roll roofing while you wait for a loan or good luck.
- IT MAY BE possible to put your money where it's most visible. Replace roofing on the street sides with the material that was used originally, but go to a less expensive close match out back or in hidden areas. (This works for recycled materials, too. For example, all salvageable old slate can be relaid on the sides of the building that show.) This plan calls for good judgement. If the materials are obviously different from each other and a view is possible where both of them show together, the roof may look worse than if it were all covered in the less expensive material.

About Materials

LLUSTRATIONS and specifications for most roofing materials can be found in Architectural Graphic Standards. This is the architect's standard reference; it's in most libraries. Manufacturers' specs and sales brochures tell most of what you and your roofer need to know. Here are a few comments you might not find:

• WOOD -- Shingles and shakes are available in three grades. Always buy #1 Blue Label for residential roofs; these are 100% clear edge-grain heartwood. Don't use copper flashing or nails with red cedar, because red cedar corrodes copper. Fire-retardant shingles have a nationwide reputation for brittleness and shortened life, though the reputation seems worse in areas with very cold winters. In our opinion, paying for fire-retardant wood shingles makes sense only on a public historic building where nothing else would be appropriate and fire codes have to be satisfied.

WOOD SHINGLES and shakes should be laid on open sheathing: nailers, not a solid deck. This is not possible in a heated building that has no headroom or attic upstairs and therefore must be insulated at the rafters. If you are thus forced to use closed sheathing for insulation purposes, we would not recommend the use



ROOFING MATERIALS COMPARED



MATERIAL	DESCRIPTION	COLOR/ TEXTURE	BUTT THICK- NESS	MINIMUM SLOPE (inches of rise per ft. of run)	WEIGHT/ SQUARE (pounds)	FIRE RATING	COST/ SQUARE (materials only)	LIFE (years)
Asbestos- cement	Twin Lap	Green, black, white, gray, red, and cedar	5/32''	3 to 5	250-265	В	\$60-90	25-40
	Slatelike	Convincing bevelled slate texture in gray, red, green, black	1/4"	4	500	А	\$140	40+
	Virginia	Gray-black, micaceous luster	3/16-1/4"	4	700-800	Non- combus- tible	\$350	175
Slate	Vermont/N. Y.	Weathering & unfading green, light purple, mottled, gray, gray-black, red		, ,			\$185- \$1200	100
	Pennsylvania	Blue-gray to blue-black	"	"	"	"	\$250	40-50
Wood	Handsplit/resawn shakes	Rough-not tight on roof	1/2-1¼"	4	200-450	C (if fire retarded)	\$50-138 \$140-354 (fancy butt)	30
	Machine-sawn shingles	Thinner & flatter than handsplit; no "channels"	3/8′′	"	200	,,	\$45-92	15
Concrete	Forms resembling Mission tile, slate, and wood shingles	Neutral and various terra- cotta colors; glazed and unglazed	1" (woodlike)	2½	950- 1300	Non- combus- tible	\$48 - 180	50-75
Asphalt	Top-of-line wood look	Three-dimensional appearance in variety of colors	1/8′′	4	330	C (wind resistant)	\$70	20-2
Asphalt- fiberglass	Random overlay tabs	Three-dimensional; mottled wood-like colors	1/8"	2" for special applications	290	Α	\$78	20-25
Copper	Batten-, standing-, and flat seam	16 oz. and 20 oz. used	-	¼" flat; 2½" standing seam	125- 155	Non- combus- tible	\$200 (approx. for 16-oz. matl.)	60+
Lead-coated copper	Batten-, standing-, and flat seam	16 oz. and 20 oz. used		¼" flat; 2½" standing seam	140- 170	Non- combus- tible	\$230 (approx. for 16-oz. matl.)	60+
Tin/terne (coated steel)	Batten-, standing-, and flat seam	0.12 - 0.15" thickness	-	¼" flat; 2½" standing seam	62- 76	Non- combus- tible	\$72	†
Terne-coated stainless	Batten-, standing-, and flat seam	26 gauge		¼" flat; 2½" standing seam	71	Non- combus- tible	\$147	t
Metal shingles	Victorian pattern	Interlocking, late-Victorian and early 20th cent. style	-	5	103	Non- combus- tible	\$100- 140	t
(prefinished steel)*	"Spanish tile"	Interlocking shingle that mimics Spanish tile	-	6	120	"	\$125	†
	Flat Georgian shingle	To look like wood shingles; red, gray, black, moss green, cedar, and terra cotta	3/8 - 1"	4	1400	Non- combus- tible	\$700 (large orders)	75+
Clay tile	English interlock (Williamsburg)	Flat interlocking	3/4 - 7/8"	4½	800	,	\$250	100-
	Spanish	Interlocking; installed with- out nailing batten	1/2"	4½	850		\$219	100-
	Barrel	Half-cylinders installed on nailing battens		4½	1350		\$392- 432	1004

^{*} Approximate cost per square in other materials: Terne-coated steel, \$181; Stainless steel, \$375; Terne-coated stainless, \$397; Copper, \$516.
† Copper and lead-coated copper, as well as modern self-healing alloys such as 'Galvalume,' don't need to be painted. Factory-applied finishes are guaranteed by the manufacturer, usually for a period of 20 years. Traditional metals such as tin- and terne-plate will last indefinitely only if they are kept painted.

of a wood roof, unless your budget allows replacement every decade or so. Handsplit shakes must be interlaid with 18-inch strips of felt, but they still go on over open sheathing.

- METAL -- Metal roofing comes in a few shingle designs (including 'barrel tile') as well as sheet roofing, which is laid with flat, standing, or batten (ribbed) seams. Copper and lead-coated copper are considered superior. Also available are tin- and terne-coated steel, lead, zinc, stainless steel, galvanized steel, aluminum alloys, and various alloy- and enamel-coated versions. Labor is much of the cost of a metal roof, so it makes sense to choose the best material you can afford. Copper, lead, 'self-healing' alloys, and factory-finished metals don't need maintenance, but other traditional metal roofs will last indefinitely only if they are kept painted.
- SLATE -- Vermont and Virginia slate last indefinitely, so if your slate roof leaks, look first for missing slates, nails letting go, and gutters and flashings that need repair. An unscrupulous roofer may tell you to replace a roof just so he can resell the reusable slate! If the slates themselves are not delaminating or crumbling, they can be relaid with new nails and flashings (copper strongly preferred). Pennsylvania slate may begin to fail after 40 or 50 years. But if your roofer recommends tearing off your slate roof, ask to see examples of failure in bad slates.
- CLAY TILE -- Tile ranges from moderately to very expensive, and it's among the heaviest of roofings. But it will last well over 100 years (manufacturers claim 350). Like slate, tile is brittle. Don't walk directly on it. Lots of moulded shapes are available, as well as flat tiles. And to clear up a common confusion:



About Hiring a Roofer

REROOFING IS time-consuming, laborious, hazardous, and boring," says a popular howto book, in reference to do-it-yourself roof work. We agree. Some roofs are more easily handled by the homeowner than others, of course. But most people will hire a roofing contractor for major jobs.

TALK ABOUT RISKY! A new roof may be the most extensive and expensive old-house investment you'll ever face. You've got to hire smart. The best recommendation would come from a satisfied previous client with a roof similar to yours. If such a recommendation is unavailable, you start with the Yellow Pages.

THERE ARE different types of roofers: commercial, residential, those who specialize in gutters, leaders, and flashing, and roofers with specialties such as copper, slate, asphalt, or built-up roofing. If framing and

sheathing need work, you might be better off with a general contractor or a carpenter for that part of the job.

- GET THREE BIDS...more if you have serious doubts about any of the first three. Avoid an inexplicably low bid as much as an overly high one: You're probably not going to get the same service. If all else is equal, it makes sense to take the lowest bid. First, though, you have to find out if all else is equal.
- COMPARE APPLES WITH APPLES. One bid may be for over-roofing alone. Another roofer may be planning to remove the existing shingles. The price bid by the third may include replacement of flashings as well as roof covering. Always inquire whether flashing and drainage (gutters, leaders) are to be repaired or replaced, and with what.
- INSIST ON AN ACTUAL SAMPLE of the roofing material being suggested: Everything looks good in a brochure. Know the type, color, weight, manufacturer, estimated quantity, and guaranteed or estimated life of the material.
- GET REFERENCES. Because all new roofs look good, be sure to check on one that's been in service for at least a year or two. "It seems like every time the factory lays off 50 workers, ten new roofers appear," warns one of our consulting roofers. Hire a roofer who has been in business in your locality for a good while. Check with the Better Business Bureau and the county consumer agency to see if any complaints have been filed against your potential roofer.
- WORRY ABOUT INSURANCE. It's not a problem if you pick a reputable roofer, but check anyway. The contractor should carry liability coverage, worker's compensation, and a license (if required locally). Also, you'd best have a comprehensive homeowner's policy yourself.
- SIGN A COMPLETE CONTRACT. It should include completion dates, specific materials to be used, insurance coverage, how cleanup is to be handled and by whom. If you're doing some of the work yourself and the contractor is doing the rest, be sure this is explicitly spelled out. Sharing the work may save you some money, but it's the riskiest deal contractually.

IF YOU NOTICE a job in progress or a recently laid roof much like yours, don't hesitate to go to the door and ask the house owners who did the work. An unusual or noticeably superior job shows that the owners spent time and money. If it were your house, wouldn't you be delighted that a stranger had noticed?

A THANK YOU TO SOME SPECIAL ROOFERS

Much of the information in this Special Roof Issue comes not from previously published books and articles, but from the recommendations of manufacturers and roofers themselves. In addition to contributors acknowledged later in this issue, we'd especially like to thank Jeff Alte, Alte Roofing Inc., Somerville, N.J.; Frank Bogardus, Manlius, N.Y.; and Andrew Buckner, Blackmore and Buckner Roofing, Indianapolis, Indiana.

Wood-shingle ingenuity — If you're a roofer, a building historian, or a homeowner with one of these roofs (intact or buried in asphalt), this article may be a revelation. The rest of us nevertheless find it a delightful curiosity. And the discovery of these lost roofs is more evidence that so-called 'plain' post-Victorian residential architecture is full of surprises! — Ed.



AMERICAN' 'THATCH'

by Larry Jones Utah State Historical Society

ONFRONTED WITH his first example of wood 'thatch,' roofer Gary Cooke said it "looked like a big Hershey kiss that melted and was dripping off the edges." The asymmetrical, rounded shapes of these roofs are so contrary to the flat, sharp-edged roofs we're accustomed to that they draw a lot of attention -- especially during a sensitive reroofing job. And those are rare indeed: The methods are largely a mystery, and the cost is well over twice that of a traditional wood-shingle job.

THERE ARE, however, a few innovative contractors who can't say no to such a creative challenge. These people have taken it upon themselves to relearn, if not reinvent, ways of bending and laying these peculiarly American roofs.

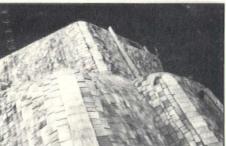
'THATCH' ROOFS are an outgrowth of the popularity of English Tudor and cottage designs early in this century. As early as 1912, building magazines showed

examples of wood shingles persuaded to look like thatch. But the style was most popular in the 1920s and '30s, due in part perhaps to the advertising of the Creo-Dipt Company of North Tonawanda, New York, manufacturers of wood shingles. This firm, as well as Minnesota's Edam Company, began national marketing of special pre-bent, stained shingles.

THOROUGHLY DETAILED instructions, framing illustrations, and specifications for their products were found in Sweet's Architectural Catalogs. To further simplify the complex and novel process of designing roof framing and estimating shingles, the firm offered free reviews of architects' and builders' plans.

ROOF FRAMING was specified to have open shingle lath to allow shingles to dry. Rounded gables, eaves, and valleys had to be designed with a





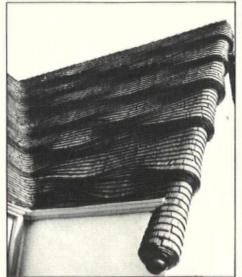


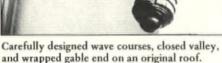
Views of a new wood-shingle thatch roof in Sioux Falls, South Dakota, laid by C & H Roofing. The original, unique roof structure, together with a rediscovered shingling method, create a roof that is the major architectural feature of the English cottage-style house. Can you imagine such a roof covered with any modern material?

20-inch radius to properly accept the factorybent shingles. Creo-Dipt warned that, while shingles could be formed lengthwise (with the grain) to any radius desired (to 5 inches), they could not be bent against the grain to a radius of less than 20 inches.

TODAY'S ROOFERS tackling a reroofing job must not only replicate the original roof patterns, but also reinvent the machinery for softening and bending the shingles. Alas, pre-bent ones can no longer be ordered from Creo-Dipt!

HE SAME SOLUTION to the perplexing problem, "How do you bend the suckers?", seems to have been arrived at independently by each modern roofer. Steam bending is almost always the answer. Salt Lake City roofer Kraig Clawson found that boiling shingles in water often caused them to turn black or break. Gary







The sad but common condition of 'thatch' roofs today: Cheap, clumsily applied asphalt shingles never look worse than on these undulating roofs.

This original roof in Utah proves not all designs had rolled gables and eaves.



Cooke in Sioux Falls settled on steaming after failing with an ammonia-water soak and boiling.

ONCE SOFTENED, shingles are immediately placed in a metal break, pressed, and allowed to cool. Kraig Clawson now uses a simple yet sophisticated air-powered press to bend shingles. press was designed by a talented machinist friend named Verl Perry, who incidentally made parts for the University of Utah's famous artificial heart.

BOTH Clawson's Great Basin Roofing and Cooke's C & H Roofing produce most of the standard required shingle shapes in their shops, stockpiling them for current and future projects. But special bends typically have to be accomplished at the job site. The most difficult are compound curves, such as the bowl-shaped shingles shaped to wrap a corner.

APPLICATION of the shingles requires artistry and a lot of time. Photography is used by both companies to document the original shingle pattern before the old roof is torn off. roofer has so far developed slightly different methods of laying the shingles, based on the roofs each has been hired to replicate.

APPARENTLY, these 'thatch' roofs were laid in several ways. The Creo-Dipt preferred method was to lay the shingles much like a standard roof, with shingles laid straight up and down with vertical joints. This method required specially shaped butt ends...but there is no factory supplying such cuts. So Kraig Clawson has created several templates to mark the necessary wave patterns onto the shingles. Then he uses a small, four-inch circular saw, set to a shallow depth, to freehand-cut each course of already-laid shingles along the template line.

OTHER WOOD THATCH ROOFS were laid randomly, using regular square-butt shingles. This process, used by Gary Cooke, requires that the shingles be tilted out of vertical to give those horizontal waves; the butts remain flat. But for the shingles to fit close together, their sides must be tapered. Gary and his partners have coined names for these shingles,



Shaping the shingles: Great Basin Roofing's first propane steamer looked like

a backyard still. Water is boiled in the bottom barrel. Steam passes through a pipe to the upper barrel, which has a steaming shelf inside. If a hot shingle is not shaped and pressed within seconds, it'll break when pressed. Right, a shingle cooling in a C-clamped metal form.

now produced by the thousands in their shop. 'Ups' are shingles tapered from the butt, making the head smaller; 'downs' are tapered down from the head to make the butt smaller.

OTHER, still-anonymous roofers have undoubtedly tackled such a roof. Perhaps someone has come up with better steaming, bending, or shingling methods. Please let us hear about it: Information shared might save a roof someday.

A thank-you goes to Gary Cooke, Barry Huber, and Mike Lieneman of C & H Roofing, and to Kraig Clawson and Clark Whetten of Great Basin Roofing. In hopes of stimulating interest in American 'thatch,' this enthusiastic bunch is eager to share their hard-won knowledge. Contact C & H Roofing, 1713 South Cliff Ave., Sioux Falls, SD 57105, (605) 332-5060; Great Basin Roofing, 5704 Highland Drive, Holladay, UT 84117, (801) 277-6813. Also, OHJ will send out a packet of the information that we didn't have room for here to roofers and homeowners who are seriously considering the restoration of one of these roofs. Write to 'Thatch,' The Old-House Journal, 69A Seventh Ave., Brooklyn, NY 11217. Please enclose \$1.00 to cover photocopying and postage.

Substitute Roofings -

Credible Stand-Ins For Clay Tile, Slate, and Wood

A brief review of materials available, and a summary of the fireproof wood-shingle imitations used at Colonial Williamsburg.

by Patricia Poore

with special thanks to Thomas H. Taylor Jr. Chief Architectural Conservator Colonial Williamsburg Foundation, Virginia



Two outbuildings in Colonial Williamsburg: One of these wood shingle roofs is an impostor. Can you tell which one is the real wood shingle roof? *

NLIKE ALUMINUM SIDING and plastic beams, substitute roofings are tolerated, even embraced, by preservationists. For two good reasons, I think: There are times when resorting to imitation roofing is an inescapable necessity. These roofings are sold because they offer advantages over "the real thing." And second, a few of them are quite convincing in their simulation of a more traditional roof.

THREE MATERIALS are most often imitated: slate, terra-cotta tile, and wood. The overwhelming reason for choosing an imitation over slate or tile is cost. A secondary reason is weight, especially in the case of metal shingles standing in for heavy, breakable, harder-to-lay clay.

COST IS NOT the primary reason for seeking an alternative to wood shingles. Because of fire codes and concern for safety, fireproof shingles imitative of wood have been sought since the 1920s. Real wood shingles that have been chemically fire retarded are not only costly, but also suffer from brittleness and a shortened life due to the treatment. On the other hand, wood-shingle substitutes developed in clay, cement-asbestos, and reinforced concrete are extremely durable. A concrete tile, say, can last 75 years, longer even than first-growth, hand-split cypress, and certainly far longer than today's red cedar.

ONLY A FEW COMPANIES manufacture substitute roofings; we believe we've listed all the appropriate ones in this issue. (See pages 75 and 77.) Supradur's slatelike asbestos-cement shingle is 63% the weight of real slate, and costs from about one-half to one-tenth as much as Vermont slate, depending on the color. Monier's concrete "slate" is cheaper still, though heavier than slate itself.

TERRA-COTTA TILE is mimicked by Monier's glazed concrete tile, and by W.F. Norman's metal barrel-tile shingles. Again, concrete tiles are heavy but far less expensive than clay. The metal barrel tiles are somewhat less expensive than clay, lighter in weight, and easier to ship and handle. They may also

be more sensible than real clay for northern climates. (Metal barrel-tile roofing is nothing new. Many of those 1920s Spanish Colonials and Mission Bungalows you see have painted metal--not clay tile--roofs!)

WOOD HASN'T BEEN as easy to imitate. To this day, you'll see advertisements for wood-look shingles in concrete, clay tile, asbestos-cement (called 'mineral fiber'), asphalt or asphalt-fiberglass, even metal. Some, like those shown in this article, are successful imitations. Others have the right spirit but lack credibility, such as the top-of-the-line wood-look shingles in asphalt. A few (not listed in this issue) are ludicrous, presumably arising from the same grotesque aesthetic that gave us wood-grain vinyl siding.

THE REST of this article deals with the search for a fireproof, long-lasting, and accurate wood-shingle substitute in Williamsburg. Imitative roofing there is intended to fool the eye, no question about it. The materials they have used have been custom-specified and produced in special lots. They were also more expensive than wood shingles. That is to say, they cost much more than asphalt shingles.

SO IT ISN'T FAIR to compare such premium roofing materials to wood-look asphalt shingles. Low cost is the overriding consideration in the manufacture of asphalt shingles. People choose them over wood because they are cheaper to buy and install.

THERE'S A DIFFERENCE between <u>simulated</u> materials—custom copies—and materials which are merely <u>sympathetic</u> to the original design. Despite the impression you may get reading manufacturers' brochures, asphalt "wood" shingles aren't designed to fool anybody. Rather, these shingles, usually among the best of the line, can be seen as more sympathetic than cheaper production shingles in suggesting the color, texture, and shadow lines of wood.

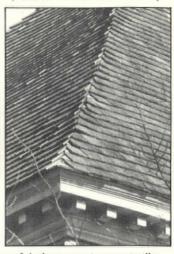
The woodshed on the left has a wood shingle roof; on the right are asbestos-cement shingles. *



Clay shingles are fairly convincing on this small building, a stable in the historic area compound.



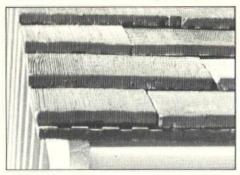
Zoom lens shows cut red edges on clay hip tiles, which roofers had to wire on with difficulty.



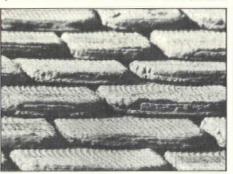
Even up close, square-butt clay tiles are admirable wood stand-ins. But all broken tiles show tell-tale red. Tabs hold replacements.

A butt-end view not usually apparent. Actually, color, size, ridges and eaves are all good wood simulations on these new concrete tiles.

Not as successful, these recent concrete tiles are too big - and strips of copper between courses are visible from across the street.



Tile disadvantages: Starter courses at eaves and regularly-scored surfaces give clay away when viewed close to eye level.



ASPHALT SHINGLES have never been considered at Colonial Williamsburg; therefore, I won't discuss them any further here. We're not dismissing or disparaging asphalt shingles, though. They may be the only conceivable choice for some homeowners. For early 20th

Through the camera's eye, a closeup of concrete tiles. Varied sizes and texture simulate wood, but broken corners are a give-away. ->

Concrete tends to look 'big,' but this roof fools

most people. . . perhaps because mossiness and moisture staining look like wood rot!



century houses, they may be quite appropriate. Two good sources are listed on page 74.

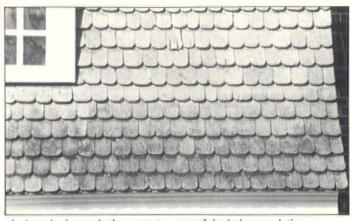
OLONIAL WILLIAMSBURG has used three woodshingle substitutes in the historic area. The photographs describe the clay tiles, reinforced concrete tiles, and cement-asbestos shingles which have been used.

THE CLAY TILE used in 1931 and again in the '50s was made by Ludowici-Celadon in 5-, 6-, and 7-in. widths. Today, they offer a production tile called the Williamsburg, 81 inches wide, but this interlocking tile is only an adaptation of those used in the restoration. A little-known fact: Ludowici will still produce the original overlapping tiles, now called the Georgian, in lots as small as 100 pieces. Colors, green, gray, cedar, and black, are quite good. Georgian weight is 1400 pounds per square, while the so-called Williamsburg tiles weigh 800 pounds per square.

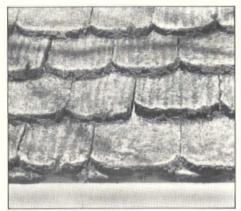




These asbestos-cement shingles would not arouse suspicion in the average visitor to Colonial Williamsburg.



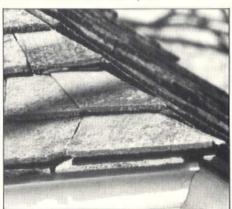
A closer look reveals the secret to successful mimicry: variation. Note the apparent randomness of shingle widths, and their different textures. A few shingles were even fabricated with 'splits.'



Up close, these asbestos-cement shingles still show a remarkable resemblance to old, weathered wood shakes.



Here, the real thing. If these pictures were in color, you'd see that the moss growing on cement is different from that on wood.



Butts and cut edges on cement-asbestos are more convincing than those on clay tile, or even on concrete.

SQUARE-BUTT CONCRETE TILES from Hendricks were first used on two buildings between 1934 and 1940. These tiles are still in place and show little deterioration or rusting of the reinforcing rods. Commercially available tiles are sold today in both square and round butts. Square-butt tiles come in widths of 6, 7, and 8 inches; round-butt have widths of 5, 6, and 7 inches. (The original Williamsburg concrete tiles were produced--not easily--in 3- to 6-inch widths.) The Hendricks "fine-grained" texture is the one to choose of three offered.

HENDRICKS CONCRETE tiles are unglazed; the mixture contains water-absorption inhibitors.

Moss and fungal growth on some concrete roofs suggest that they do retain moisture, yet rusting of the steel reinforcing bars has never been noted as a serious problem. Tile color comes from a pigmented cement slurry set on the still-wet concrete during production. Customers can order any of the neutral woodlike hues offered, or specify mixed-color tiles. In addition, moss-effect tiles are produced which have had a green pigment "salted" on during manufacture. Different color tiles can be laid randomly on the roof for a naturalistic effect.

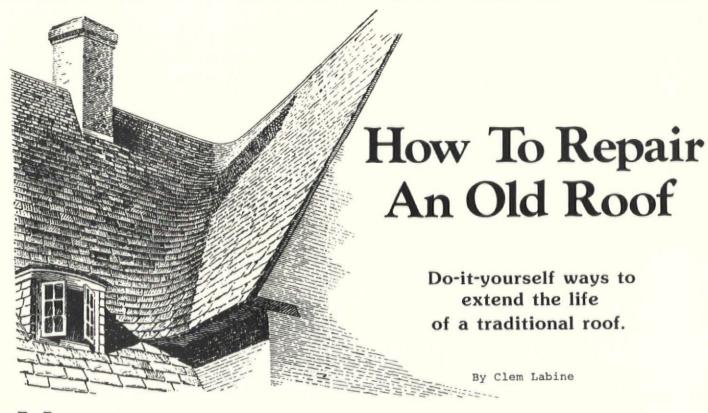
AFTER CONSIDERABLE time spent examining the substitute shingles at Colonial Williamsburg, my conclusion is that the cement-asbestos shingles are the best copy. They're also lighter in weight and extremely durable.

Such a conclusion, shared by people at Williamsburg, makes us sad, because the shingles are not sold today. They were manufactured by the Mohawk Asbestos Shingle Company, which went out of business around 1941. Colonial Williamsburg subsequently bought their machinery and, before it finally wore out, produced a stockpile which is now nearly depleted.

TODAY, ONE COMPANY makes asbestos-cement shingles which are technically okay but unacceptable visually. (Perhaps that's because a major customer for them has been not Williamsburg, but McDonald's restaurants. They would not be looking for accurate wood reproduction.)

THE ASBESTOS used in the manufacture of these shingles clearly presents problems with government regulation and public acceptance, besides the potential health hazard. The asbestos is a fireproof, long-weathering reinforcement for the concrete. A likely modern substitute for it is fiberglass. Unfortunately, fiberglass imparts a reflectivity (shine) that makes the shingles less convincing.

OTHER POSSIBILITIES EXIST. Some manufacturers have considered using polypropylene fibers to do what asbestos used to do. A market would seem to exist for a fireproof, rot-proof, long-lasting, and plausible wood substitute, both for historical restorations and homeowners. Is anybody listening?



OST ROOFING CONTRACTORS specialize in one kind of material. And for 99% of today's roofers, that material is asphalt shingles. That's why, when you call your friendly neighborhood roofer and ask him to repair your slate (or tile, or metal, or wood shingle) roof, he's likely to say: "You can't repair that. You'll have to replace with asphalt shingles." But beware: When a roofer says, "It can't be fixed," he may simply be telling you he can't fix it.

ON THE OTHER HAND, every roofing material does have a natural lifespan. When that life is up, you are better off replacing the old roof rather than spending time and money patching material that's worn out. This article is not about roof replacement, however. Rather, we'll focus on do-it-yourself repair methods that will allow you to get extra years of life out of your traditional roof. By eking out, say, four extra years from your existing roof, you could build up enough money in your Roof Replacement Fund so that you can replace with an appropriate material that will preserve the character of the house.

TECHNIQUES FOR REPAIRING asphalt shingle roofs have been amply described in the do-it-your-self books,* so we won't deal with them here.

Locating The Leak

OCATING THE LEAK is often the hardest part of a repair job. With a flat roof, the source of the leak will usually be found directly over the spot on the top floor ceiling. But with a steeply pitched roof, water can travel many feet along roof boards and rafters before showing up as a stain on the ceiling.

* For example, there's a good section on asphalt roof repair in the book "Modern Roofing," which is part of the three-book set listed on page 77E.

IF YOU CAN SEE the underside of your roof from the attic, observe the roof during a rainstorm. You should be able to see where the water is coming from. If there's a hole clear through the roofing or flashing, push a wire up through the hole to mark it from the top.

IF IT'S NOT POSSIBLE to push a wire through the roof at the source of the leak, you'll have to mark its location by measuring from the nearest convenient reference point, such as a chimney, skylight, or vent pipe.

THE MOST DANGEROUS part of the repair job is getting to the source of the trouble safely. You'll find safety tips on page 69.

The Black Goop Solution

BECAUSE TRACING the precise source of a leak is very time consuming, roofers who are called in to make repairs often resort to "the black goop solution." Rather than find the exact source of the leak, they instead spread copious quantities of roofing cement in every suspicious area. In some cases, an entire roof will be coated with roofing cement.

A DAB OF ROOFING CEMENT is a perfectly acceptable repair for roll roofing and built-up roofs. There, both the roofing and patching material are the same, and there's no visual clash. However, on other roofs such as slate, tile, wood shingles and metal, "the black goop solution" puts black pimples all over the roof.

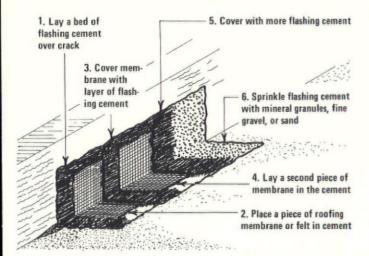
BESIDES LOOKING TERRIBLE, patches of roofing cement are only temporary. Roofing cement will dry, crack, and curl after exposure to the sun. Once the patch loosens, water can get trapped under the roofing cement--and actually hasten roof deterioration. In addition, some asphaltic materials can corrode certain metals.

ONCE YOU PUT on a roofing-cement patch, you've let yourself in for another maintenance program. The patches should be inspected twice a year to make sure they aren't cracking. The only time when roofing-cement patches make sense on a non-asphalt roof is as a frankly temporary measure to nurse a few extra years out of a roof prior to total replacement.

Roll Roofing

OST CITY ROW HOUSES have mineral-surfaced roll roofing. A few still have the older type of built-up roofing, which is discussed separately. The mineral granules on roll roofing reflect the sun's rays, and thus prolong the life of the asphalt felt underneath.

REPAIRING A CRACK IN ASPHALT FLASHING



MOST LEAKS IN FLAT ROOFS occur where the roof meets a vertical element, such as a parapet wall, skylight or vent pipe. Cracks and tears in asphalt flashing can be fixed as shown in the diagram above.

THE LAPPED JOINTS in roll roofing sometimes open. Frequently it's possible to force some

BLACK GOOP GLOSSARY

The black substances used in roofing work are referred to by an astonishing number of terms. There are, however, only three basic types of asphaltic materials (usually sold in oneand five-gallon pails) that the homeowner is likely to come across:

PLASTIC ASPHALT CEMENT — A trowelable - consistency black asphaltic mastic used for flashing and roof repairs. It contains fiber additives to make it sufficiently thick so that it won't run down vertical surfaces. The added fibers used to be asbestos, but today most brands are made without asbestos. Also called roofing cement, flashing cement, asphalt cement, plastic cement, roofing tar, bitumen, and elastic cement.

LAP CEMENT—Not as thick as plastic asphalt cements, lap cement is used to make watertight joints between lapping elements of roll roofing.

ROOF COATING—Thin enough to be applied with a long-handled brush, roof coating is used to resurface roll roofing and built-up roofs that have begun to dry and crack. Also called roof paint.

flashing cement under the seam and re-seal it by stepping on it. If the seam won't stay bed-

ded and keeps popping up, slit it and nail on both sides of the slit. Then cut a patch of 90-lb. roofing felt that overlaps the nailheads at least two inches. Coat the back of the patch with flashing cement and press it in position. Secure by nailing with roofing nails one inch apart. Cover the nailheads with flashing cement, and sprinkle fine gravel or sand over the patch.

Built-Up Roofing

BUILT-UP ROOFS consist of sheets of roofing felt bedded in layers of asphalt, with gravel spread over the top. Built-up roofing costs about 25 to 30% more than roll roofing, so you don't often see it used on houses these days. Yet built-up roofs last 30 or 40 years --twice as long as roll roofing--so they can be a very good investment.

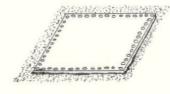
Replacing A Damaged Section In Built-Up Or Roll Roofing



 Cut out damaged area with a knife. Be careful not to slice any of the underlying roofing felts. On a built-up roof, scrape away gravel with a shovel before cutting. Pick a cool day so that gravel doesn't stick to the roofing.



 Force flashing cement under all edges of the cut. Coat the entire cut-out area with flashing cement.
 Cut patch from 90-lb. roofing felt that just fits into the cut-out, and press firmly into the cement.



3. Cut a covering patch from 90-lb. roofing felt that overlaps the cutout two inches on all sides. Coat
bottom of the patch with flashing
cement and press it into place.
For additional security, fasten the
edges with roofing nails every inch.



4. Cover the nailheads with a coating of flashing cement. For longer service life, sprinkle the flashing cement with mineral granules, fine gravel, or sand. The mineral coating reflects the sun's rays and helps prevent cracking.



Replacing A Slate

FIRST PRIORITY is to work safely on the roof. Use a ladder hook that hooks securely over the ridge of the roof and helps spread your weight.

Putting a heavy blanket under the ladder prevents mechanical shock that could break additional slates. Next, remove any of the remaining broken slate by using the slate ripper (1). Slip the thin end under the broken slate and hook it on one of the two nails holding that slate. By hammering downward on the handle of the ripper (2), you should be able to cut through the nail. Cut the other nail in similar fashion. Now, all of the broken slate should

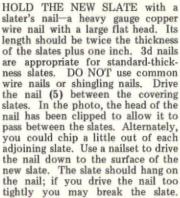


slide out. If the adjacent slates are bearing too heavily for you to get the slate ripper into place, force nails gently under the edges of the slates to wedge them up. (Or you can try using the ripper like a shoehorn.) Slide the replacement slate into position (3). After aligning it carefully, use a nailset to punch a hole right below the slot of the two covering

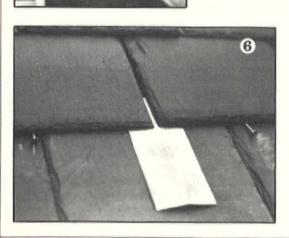
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slates (4). Make sure that you punch the hole above the double coverage; you want a hole ONLY in the new slate-not in the one below it. If you are hesitant about punching slate, mark it and drill it on the ground.



wide and 6 in. long into a slightly concave shape to make a cover for the exposed nailhead (6). (Some roofers call this cover a "baby.") Slide the cover up so that its bottom edge is 2 in. below the nailhead. If necessary, tap a screwdriver against the cover to push it up, or use nails as wedges as shown in the photo. Friction holds the cover in place (7), keeping rain out of the nail hole. If the cover is placed concave side up, it will channel rainwater better than placing the convex side up as shown in the photo.





BEND a strip of copper about 2 in.



FLASHINGS are the weak point on built-up roofs. When torn or cracked, they should be patched as shown in the diagram on the previous page. The patch of roofing membrane and flashing cement should extend at least six inches on all sides of the crack.

IF THERE ARE BARE SPOTS where the gravel has weathered away, sweep the area clean, then apply a coating of brushable roof coating. Sprinkle the coating with a layer of gravel. (You can usually scavenge gravel from another part of the roof where it has piled up.)

Slate

ALTHOUGH SLATE is a long-lasting material, a few slates may break, either from freeze/thaw cycles, or from mechanical shock, such as falling tree branches or someone walking on the roof. Replace slates as shown on the opposite page.

SLATES MAY ALSO be falling if the nails are rusting away. This occurs when the original installer tried to save money by using galvanized nails instead of copper. In this situation, there's no really satisfactory solution short of taking all the slates down and re-laying them using copper nails.

SLATE GRANULES washed off the roof can erode metal flashings. It's possible to solder patches on metal flashing, but the odds are that the entire flashing is a candidate for replacement. When replacing flashing, you have to lift some slates. Putting them back will require the special nail-and-cover technique shown at the left.

A TEMPORARY PATCH for eroded flashings can be made by inserting a piece of 15-1b. roofing felt under the slates and bedding it in flashing cement. The felt should project far enough over the flashing so that it covers the holes. This is only a short-term expedient, however. For more details about slate roofs, see the May 1980 issue of OHJ.

Wood Shingles

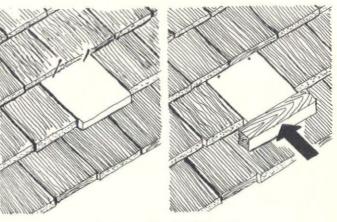
OOD SHINGLES may curl and split, or may become thin through weathering. If it's only a random shingle here and there, replacement is a relatively simple do-it-yourself job. If the number needing replacement approaches 10-15%, however, it's time to think about replacing the entire roof.

TO REPLACE a wood shingle, remove the damaged unit by splitting it with a chisel into several smaller pieces until all parts are free of the nails. Cut the heads off the nails, either with a slate ripper, or with a hacksaw blade that's inserted up under the shingles. The replacement can be held with a copper tab, or the special nailing technique shown.

A TEMPORARY REPAIR for a split wood shingle can be made by inserting a piece of sheet metal under the damaged shingle.

PAY SPECIAL ATTENTION to the flashings. Rain can leach tannic acid out of wood--especially

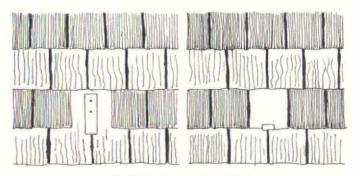
Two Ways To Fasten A Replacement Wood Shingle



THE HIDDEN NAIL METHOD

1. After removing damaged shingle, slip in replacement. Let it protrude ¼ in. below other shingles in the course. Toe-nail two finish nails immediately below upper course.

With hammer and wooden block, strike the end of the new shingle, driving it up level with the other shingles. This bends the nails and puts heads below upper shingles.



THE COPPER TAB METHOD

 Nail a strip of 1-in. copper (20 oz.) in area of missing shingle. Use copper roofing nails. 2. Insert new shingle and bend tab up. Trim off any excess so sliding ice and snow won't loosen tab.

red cedar--and the acid can corrode copper and other metals.

Cement-Asbestos Shingles

EMENT-ASBESTOS shingles (also called mineral-fiber shingles) are made from asbestos fibers embedded in portland cement. They make an attractive and durable roof; we've seen them last 50 years and longer. Having a gray color, cement-asbestos shingles are sometimes mistaken for slate.

OLD CEMENT-ASBESTOS shingles absorb a fair amount of water during a rain, and thus stay damp for a while. As a result, on some cement-asbestos roofs you'll find moss and other organic growth. Normally, this isn't a problem until the moss builds up to a point where it acts as a small dam, causing backup of water on the roof. These accumulations should be re-

moved by hand scraping when they build up to troublesome proportions.

LIKE SLATE AND TILE, cement-asbestos shingles are brittle, and thus some will break from time to time. Replacement technique is the same as for slate: Use either the nail-and-cover or copper tab methods. You have to be careful when working on a cement-asbestos roof not to break additional shingles.

TO FIND MATCHING replacement shingles, check your attic and outbuildings to see if a thoughtful roofer left a batch of extra shingles for you. If not, check roofers in the Yellow Pages to see who might have salvage material. temporary expedient, you could cut a piece of sheet metal or roofing felt to the appropriate shape and paint it to match.

Ceramic Tile

BROKEN CERAMIC TILES are replaced fairly easily. As with slates, the hardest parts As with slates, the hardest part is getting to the trouble spot without breaking more tiles. See the tips in the slate section. If any damaged tile remains, remove it by breaking it up with careful hammer blows. Cut the nail with a slate ripper, or insert a hack-saw blade under the covering tile. Hold replacement tile with a copper tab as shown below. Use a double thickness of cop-per at the end of the tab. This extra stiffness helps keep the tab from getting unbent from the weight of the tile or the force of descending ice and snow. Finding replacement tiles that match can be a problem. You may get lucky and locate a dealer in salvage roofing. If you just need a couple of pieces of barrel tile, you can fake it. Get a piece of PVC drain pipe, slice it in half, and paint to match.

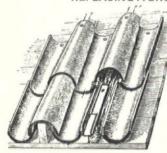


Use double thickness at bent end of copper tab.

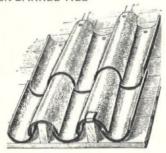


Replacement barrel tile can be made by splitting a section of PVC pipe.

REPLACING A BROKEN BARREL TILE



1. After removing broken tile, fasten copper tab to nailer strip. Use a copper nail.



2. Slip new tile in place and bend copper tab up to hold the tile in position.

Sheet Metal Roofing

POPULAR FIX-IT BOOK has this to say about Arepairing sheet metal roofs: "Leaks are stopped by coating with roofing cement or asphalt paint." This is breathtakingly bad

advice! Refer to page 64 for the dangers of "the black goop solution."

IF SOLDERED SEAMS are broken, they can be resoldered. The cause of the breaks, however, was probably faulty design or installation. Expansion and contraction of the metal sheets strained the joints so that they opened. though you re-solder them, odds are they'11 open up again unless expansion joints are installed that allow for movement in the roof (no small task!).

TIPS ON SOLDERING METAL ROOFS

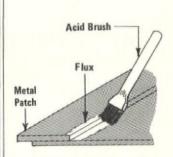
- 1. With chemical paint stripper, remove any paint from the metal surrounding the patch. If there's any roofing tar, remove it by scraping, followed by scrubbing with kerosene, gasoline, or mineral spirits. (Caution: These solvents are VERY flammable.)
- 2. Clean both the roof and the patch piece by scouring with a wire brush or steel wool.
- 3. For soldering copper: Apply muriatic acid for 60 seconds to dissolve any oxides. Wash and wipe dry. Paint on liquid soldering flux (zinc chloride). Apply flux ONLY where you want solder to go. Pre-tin the area by heating with a soldering copper and applying a thin coating of solder. Apply patch and hold in place with heavy weight, or fasten it mechanically with two copper rivets or nails. Solder as indicated below.

For soldering galvanized steel: Apply muriatic acid as in step number 3 above. The muriatic acid will also serve as the flux, so after 60 seconds leave acid in place, apply patch, and solder as indicated below.

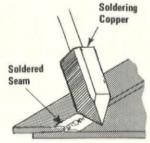
For soldering lead-coated copper, terne, and tin plate: Apply liquid flux (zinc chloride). Apply patch and hold in place with weight or nails. If nails are used, be sure they are of the same metal as the roof. (Otherwise, you risk galvanic corrosion.) Solder as indicated below.

- 4. Use bar solder that's 50% tin and 50% lead. For roofing work, you'll need a large soldering copper (1-11/2 lb. or bigger). A home workbench soldering iron won't transmit enough heat to the roof to get solder to flow under the patch.
- 5. A well-tinned copper is a must! (If you don't understand about tinning, get a book on sheet metal work out of your library.) You want to heat the metal as well as the solder, so that solder flows into the seam. Since most of the heat is in the base of the tip, hold your soldering copper as shown. If you held the patch with nails, be sure solder covers the nailheads.
- 6. When soldering is complete, rinse off all excess flux with water and wipe dry. If patch is galvanized, terne, or tinplate, paint patch to match rest of roof.

SAFETY NOTE: Beware using flame tools for soldering on the roof. The danger of setting the roof on fire is always present.



1. Apply flux only where solder should flow



2. Use base of the soldering copper tip to heat the entire seam.

YOU CAN'T REPLACE a damaged sheet in a metal roof that has interlocking joints. Therefore, patching is the only option. Soldered patches are preferred. If soldering is beyond you, use one of the "cold" patching methods discussed below. These cold patches don't last long, however, and have to be maintained regularly.

Metal Shingles

ETAL SHINGLES of galvanized or terne-coated steel will last indefinitely if kept painted. Painting should not be put off until rust spots appear. If there are any rusted areas, wire-brush and apply an iron oxide metal primer before the finish coat is applied.

IT'S VIRTUALLY IMPOSSIBLE to replace a damaged metal shingle because of the way they interlock. The best repair is a soldered patch (see preceding page).

IF YOU CAN'T MANAGE a soldered repair, there are a number of commercial sealing products used for patching metal gutters, such as gutter tape, that you can use for a "cold" patch. Such patches are strictly TEMPORARY.

YOU CAN ALSO make a temporary patch with sheetmetal and flashing cement. Clean the metal with a wire brush or steel wool. Cut a sheetmetal patch that overlaps the hole at least 3 inches on all sides. Coat the back of the patch with flashing cement. Press the patch firmly into place-just hard enough so that the cement doesn't ooze onto the roof. Paint the patch to match the rest of the roof.

Flashing Repairs

AP FLASHING may come loose from the reglet in a chimney or other vertical wall. Repair by re-wedging and sealing the reglet. (See pages 70-71 for details on how to wedge a cap flashing.) The reglet can be filled with mortar (preferred) or a high-quality sealant, such as urethane caulk.

HOLES IN COPPER FLASHING are best repaired with a soldered patch. Aluminum flashing is difficult to solder, so holes would have to be covered by one of the "cold" patching methods discussed in the section on sheet-metal shingles. These patches are strictly temporary, however, and should be inspected at least twice a year to make sure they are still holding.

SPECIAL THANKS for technical assistance to Mr. Russel Watsky of Westal Contracting Corp., Ossining, N.Y. Westal is a roofing contractor specializing in the installation and repair of metal roofing of all types.

A little apprehension helps keep you safe, but terrified people don't belong up on a roof. If you have any doubts about your abilities or your equipment (ladders, scaffolds, brackets), hire somebody else to do the work. It's tempting to ignore annoying safety warnings. ("It's such a small job — I don't need a harness.") But conjure with this: Every year, healthy and competent people do indeed fall off roofs. We're not talking about statistics, we're talking about OHJ subscribers and contributors. Please, please be careful.

Ladder Safety

- Inspect the ladder before using it; clean it of any dirt or oil.
 Do not use the ladder if it's in need of repair. Be sure you use a ladder rated for your weight plus the weight of any tools or supplies you'll be carrying.
- Don't place the ladder near any electrical lines unless it's a fiberglass model suitable for such use. If you are working near power lines, be careful not to touch them yourself.
- Don't stand the ladder in front of a door opening. If you must, lock the door or obstruct it and post a warning.
- 4. Double check the locks on an extension ladder before climbing. Overlap extension ladders at least 3 feet for 36-foot lengths, 4 feet for 48-foot lengths,

for 36-foot lengths, 4 feet for 48-foot lengths, and 5 feet for 60-foot lengths. Be sure the top section is outermost. Never try to extend the ladder when you're on it.

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Angle the ladder correctly against the building. The distance from the base of the ladder to the building should be equal to about onefourth the height of the ladder.

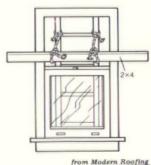
6. Be sure to place the ladder on firm ground. If you can't get someone to hold it as you climb, drive stakes at the bottom of the ladder to prevent the legs from kicking out. The ladder should also be tied at the top, as in the illustration. Extend the ladder a minimum of

three feet above the roof edge, but never stand on those top three rungs.

7. When climbing up or down, always face the ladder. Use its handrails rather than gripping the rungs as you climb. Don't load yourself down with too many tools or supplies; make several trips if you have a lot of equipment.

On The Roof

- Wear rubber-soled shoes that have non-slip tread (preferably sneakers with a high top for good ankle support). Avoid wearing loose clothing.
 - 2. Wear a safety belt or harness and secure it to the chimney (if it's in good shape) or to a window on the opposite side of the house (as in the illustration). Leave only enough slack so you can work comfortably in one area, and adjust the slack as you work on other sections of the roof.
 - 3. Be sure the roof is clear of debris and water. Avoid stepping on damaged or crumbling roofing materials.
 - 4. Use a rack to hold your tools and supplies. Do not stand on it unless it's a scaffold specially designed to support you as well. (See the January 1982 OHJ for more details about constructing and using a roof rack.)



Flashing A Chimney

A Do-It-Yourself Solution To A Common Problem

By Jonathan Poore

FLASHING makes watertight joints at junctions between roof and walls, around chimneys, skylights, vent pipes, and in valleys and hips where two planes of a roof meet. Often, the flashing develops leaks before the roofing material does.

This Design File shows the most complex flashing problem: making a watertight joint between a chimney and a shingle roof. Chimney flashing is often damaged, badly installed, or missing altogether. Installing proper chimney flashing is within the capability of the competent do-it-yourselfer. Although special roofer's tools make the job go faster, we've adapted the procedures to tools that many homeowners have.

(1) LAYOUT—Study this series of drawings to determine what measurements you'll need. If you have an existing chimney flashing that was done correctly, just save the old pieces and use them for patterns. You might also have a cricket, a water-diverting ridge in the roof right behind the chimney. If so, follow the old flashing as a pattern.

Some over-all layout guidelines: Base flashing must extend under the shingles a minimum of 4", and also up the chimney a minimum of 4". Counter (cap) flashing must overlap the base a minimum of 4". Go around corners 2" for double overlap.

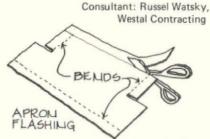
(2) MATERIALS—A professional roofer would usually use cold-rolled copper for this job. He has special bending tools that will handle this stiff material. However, you're not sacrificing much if you use the easier-to-work 16-oz. soft-tempered copper. Copper isn't much more expensive than other metals, and if you're doing all the work, there's no reason not to use the best material. If you're worried about green stains from the copper, use lead-coated copper.

Roofing felt should be laid on the roof decking beneath the base flashing if none exists. Use only copper nails with copper flashing (size nails so that you get at least 1" penetration into roof deck).

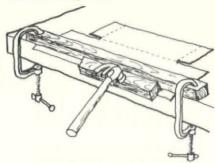
(3) CUTTING & BENDING—Mark all bends, cuts, notches. If you have to cut and bend pieces yourself, regular metal cutting shears can cut 16-oz. copper.

If all measurements are taken beforehand, or if you're using old flashing as a pattern, you may be able to get the shop where you buy the copper to cut and bend it for you.

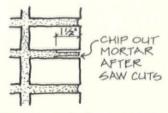
To form pieces without having to buy bending breaks, tongs, etc.: Clamp a 2x4



over the flashing piece, with the bending line at the edge of the work table. Use an additional piece of 2x4 as a block to place against flashing. Bend by striking with a hammer. This will give a 90-degree bend. Where necessary to create a hem, unclamp and continue hammering against a 2x4 to bend metal edge over.

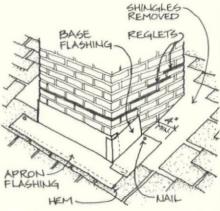


(4) REGLET—The reglet is the slot cut in the chimney to hold the cap flashing. The reglet goes straight across the front, is stepped along the two sides, and goes straight across the back (assuming there's no cricket). Use a diamond blade with a water spray attachment in a hand-held circular saw; or a portable grinder with a masonry blade. A circular saw with a carbide masonry blade will work, but not as fast as a grinder. In many cases, a cold chisel is really all you need.



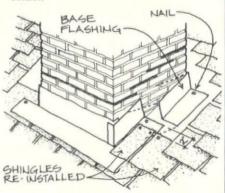
Make two passes in the mortar joint with the blade set at 1½". Then use cold chisel to knock out mortar between cuts.

(5) BASE FLASHING: APRON—Remove shingles on three sides of chimney. Remove to next full shingle beyond the 4" minimum. Don't remove any shingles on the down side.



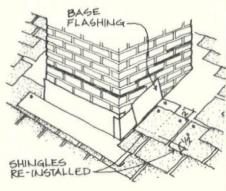
Install apron flashing over shingles on lower slope. There should be a hem at the bottom edge. Place one nail at each top corner where it will be covered by first piece of side base flashing.

(6) STEPPED BASE FLASHING—Install base flashing on sloped sides. Note placement of single nail in flashing and two nails in covering shingle. First piece of side base flashing comes around corner to overlap apron, so there's double coverage at each corner.



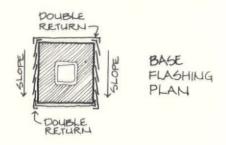
Allow 2" of base flashing to extend above top of covering shingle. Flashing should be 1/2" above where butt end (bottom) of covering shingle will be.

Continue to interweave base flashing, then shingle. Be sure that shingle covers nail in base flashing, and next piece of flashing covers nails in previous shingle. Note dimensions of overlap.



Restoration Design File #14

Length of each piece of base flashing is determined by the length and headlap of the shingles. Relay shingles with the same lap



that they had. Continue up slope on each side of chimney.

Then install continuous strip of base flashing on the up-slope side of the chimney, much like the apron flashing at the bottom, except that this piece goes under the shingles that were removed earlier. Create a return at each corner of this flashing to overlap the base flashing. Replace the shingles on the up-slope side of the chimney.

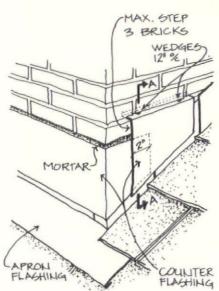
(7) COUNTERFLASHING APRON—All base flashing is counterflashed with cap pieces let into the reglet. All cap pieces have a ½" lip on the edge inside the reglet. A hem at the bottom of the cap flashing will stiffen the edge, but if it's too difficult

COUNTER FLASHING

W/ RETURN

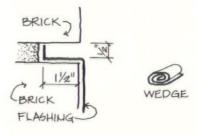
BASE FLASHING RETURN

REGLETS

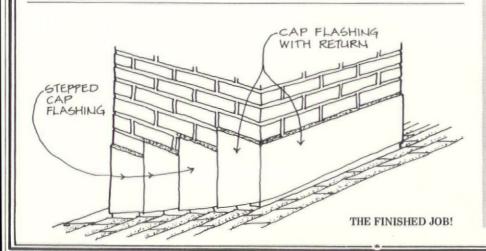


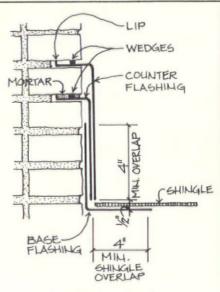
to bend, it's not necessary. Note how the apron counterflashing returns around corners. The apron counter (cap) flashing can extend all the way down the vertical surface.

Use rolled metal wedges (either lead or copper) no more than 12" apart to hold cap flashing in the reglet.



(8) STEPPED COUNTERFLASHING—Install each piece of stepped counterflashing according to the drawings. Maximum step-up between pieces is 3 bricks. If slope is very steep, cut more (and narrower) pieces to compensate.

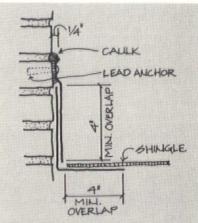




SECTION A-A

Place metal wedges every 12" in reglet, a minimum of two for each piece of stepped flashing. Cap flashing must overlap base flashing at least 4", but it can come all the way down the vertical wall if desired. Each piece of stepped flashing overlaps the previous one 2" on the vertical seam.

(9) REMORTARING—Repoint the reglet with a mortar that matches the original in composition, color, and shape of joint. Alternately, caulk can be used, but this will require annual inspection and maintenance.



ALTERNATE CAP FLASHING

Sometimes it's impossible or undesirable to cut a reglet in a vertical wall. You can make a surface-mounted cap flashing as shown. The flashing is held with brass screws driven into lead anchors in the masonry. Top of the cap flashing is flared '4" and sealed with caulk. This solution requires annual inspection and maintenance of the caulk seal. . . obviously less desirable than the more durable cap-in-reglet flashing.

Maintaining Your Roof:

Inspection Checklist

A roof, traditional or not, is all that stands between the interior of your house and the terrible weather outside. Consider the case of the homeowner who couldn't bear to put his limited budget where it wouldn't show: toward a leaky old flat roof.

Temporary tar patches worked for a while . . . but then, in a late winter rainstorm, disaster struck. Water poured into an exterior wall, ruining newly patched plaster a full storey below the roof. Closer inspection revealed rotted window heads and sash on the top floor, caused by months of water seepage.

The moral? Resist the temptation to spend money first on something more fun than your roof. It's money wasted if you don't have a well maintained roof overhead. Roofing, flashing, and gutters should be inspected twice a year, before and after the harsh weather of winter.

Peeling paint and/or rotted or curled boards in

the porch ceiling.

Rooting Materials Rooting Elements				
ASPHALT SHINGLES: Pay particular attention to shingles on ridge, hips, and at roof edges; they get the hardest wear. Also look out for lumpiness that indicates a new roof has been applied over old shingles; all sorts of damage could be covered up that way.	PROJECTIONS: Anything that breaks through the roof surface, such as a chimney or ventpipe, offers an excellent entrance for water and so must be adequately flashed. Check that no projection or ornament is so weak or damaged that it could topple and smash roofing materials.			
 Mineral granules almost totally worn off shingles. Mineral granules collecting in gutters and at base of downspouts. Edges of shingles look worn. Nails popping up. 	 Connections around projections are improperly flashed. Mortar joints of chimney have weathered to a point where they admit water. TV antenna, lightning rod, weather vane, etc., is loose and wobbly. 			
Roof looks new but lumpy. Mold or moss forming on shingles. CLAY TILES: Clay tiles will weather well, but are prone to	GALVANIC ACTION: Corrosion of roof metals can be caused by galvanic action.			
breakage from mechanical shock, such as a falling tree limb or people walking on them.	Ferrous metals touching dissimilar metals, such as galvanized nails in copper flashing.			
 □ Broken or missing tiles. □ Nails popping up. □ Mold or moss forming on tiles. 	CORNICE: Roofs frequently fail first at the edges and admit water into the cornice.			
METAL: If the metal isn't copper, your primary task will be to fight rust by keeping the roof painted.	Moisture causing paint to peel on cornice, especially at the underside.			
Rust or corrosion spots. Signs of previous "tar pot" patch jobs. Punctures in metal. Joints and seams broken.	UNDERSIDE OF ROOF: Pay particular attention to projections and at eaves. Inspect on a rainy day to see if water stains are a current or past problem.			
SLATE: A properly laid slate roof should last a century or more. Vermont, New York, and Virginia slates tend to be more durable than Pennsylvania slates, which eventually delaminate from pollution or weather. Broken or missing slates.	Water stains on rafters or roof boards. FLASHING: Flashing is usually made of thin metal, such as copper, aluminum, or galvanized steel. It should be installed completely around every protrusion through the roof, and at every			
☐ Slate flaking apart. ☐ Slate particles collecting in valley flashing. ☐ Nails letting go.	joint where a vertical wall intersects the roof. Flashing is loose, corroded, broken, or missing. Daubs of roof cement on flashing hide leaks that may not have been corrected.			
WOOD SHINGLES AND SHAKES: Shingles are machine sawn; shakes, handsplit. For maximum roof life, both require proper air circulation underneath so they can dry after a rain. Therefore, they should be laid on open sheathing. If yours were laid improperly, you can help them dry by providing adequate ven-	 Uncaulked openings at the tops of flashing permit water to enter. Vertical joint doesn't have both base flashing and counterflashing. 			
tilation in your attic. Moss or mold forming on wood. Cupping or warping of wood. Deep cracks and splits in wood. Wood has become uniformly thin from erosion.	GUTTERS AND LEADERS: Leaking gutters can cause extensive damage to the entire house, not just the roof. Pay special attention to built-in gutters, which can feed hidden leaks directly into the cornice and down into the main structure. Gutters are clogged with debris or ice.			
FLAT ROOFS: Water collects easily on a flat roof, so give a close look to the flashing around all the projections: chimney, skylight, ventpipes, etc. Also, be sure the roofing is flat and tight to the decking below.	Gutters are rusty or corroded. Gutters are loose, tilted, or missing. Seams are broken in metal linings of built-in gutters.			
 □ Bubbling, cracking, and/or separating in the asphalt or roofing felt. □ Roofing feels loose and squishy underfoot. □ Water ponding on roof 	PORCH CEILINGS: Moisture problems in a porch ceiling are indications of faulty drainage from the roof above. You'll have to inspect the roof to make sure water isn't entering the main structure of the house as well.			

Mineral granules or gravel has all weathered away.

Roofing felt looks dry and cracked.

Restoration Products News



Some roofing products were deliberately left out of this issue as inferior or inappropriate. Lists like this one usually bring forth the worthwhile companies we missed, however: We look forward to readers pointing out any oversights! Company addresses are in an alphabetical list at the end of this section.

- Joni Monnich

Slate Shingles

We've listed the few quarries still preparing roofing slate. With quarries in the three major U.S. slate regions — Vermont/New York, Virginia, and Pennsylvania — you can nearly always find replacement slate to match your roof.

Often you can have a local stone supplier order for you. But even when you have to contact the quarry directly, shipping may cost less than you think. For slate shipped from Vermont to NYC, the cost is approximately \$10-20 per square, or \$25-40 per square from Vermont to St. Louis.

mont to St. Louis.

High-quality Virginia slate in blueblack or Oxford-gray is offered by Buckingham-Virginia Slate Corp. It's guaranteed not to fade or deteriorate. Prices vary depending on the order.

The primary source for Pennsylvannia roofing slate is Structural Slate. Slates are available only in standard, rectangular shingles in the characteristic Pennsylvania blue-black color. The cost is approximately \$250 per square.

Slater's tools as well as Vermont slate is provided by the Evergreen Slate Co. Colors are semi-weathering gray-green, royal purple, unfading green, unfading mottled green and purple, blue-black, unfading mottled gray, unfading red, and Vermont black. Prices begin at \$200 per square.

Granville, New York, is the source for that most expensive and decorative U.S. slate: red. Hilltop Slate also quarries black, green, purple, mottled purple, and weathering green and gray slate. Prices range from \$185 to \$1150 per square, depending on color.

Founded in 1869, Rising & Nelson supplies Vermont slate in all the area colors. Prices range from \$300 to \$400 per square and include shipping to the New York City area.

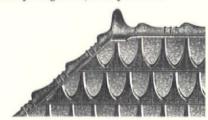
Vermont Structural Slate produces slate shingles from its own quarries in a full range of Vermont colors, including unfading green, unfading mottled green and purple, unfading purple, and Winchester black. Prices begin at about \$300 per square. This company also sells the indispensable book *Slate Roofs*, a 1926 reprint on the history and installation of slate roofs. The handbook is \$7.95 ppd.

For just a few replacement slates, your best and least expensive bet may be salvaged shingles. Mr. Slate in Vermont will match your samples. They keep on hand a large selection of colors, and will do custom cutting. Prices begin at \$160 per square. They also sell newly quarried New York and Vermont slate, with prices beginning at \$225 per square.

Metal Roofing

Here we list sources for metal shingles in Victorian patterns as well as sheet roofing for flat-seam, standing-seam, and batten-seam roofs. Copper roofs, especially, are very long lasting.

The people who've brought back fancy metal ceilings, W.F. Norman, also manufacture copies of 1908 metal shingle patterns. They're offered in 28-gauge galvanized steel or solid copper. In galvanized steel, *Victorian Style A* and *C* are \$195.75 per square, while the *Normandie Style* is \$108.80 per square. Reproduction metal trimmings for ridges and hips begin at \$1.15 per foot.



Style A shingles on roof are available with matching ridge and hip tile.

Follansbee Steel is the manufacturer of terne and terne-coated stainless steel roofing used on many historic buildings. They offer both standing- and battenseam in 30-, 28-, and 26-gauge metal. The basic material cost for 28-gauge is \$72 per square for terne and \$147 per square for terne-coated stainless steel. The material can be purchased for fabrication on site, or pre-formed to your specs.

A commercial manufacturer of metal roofing, Berridge Manufacturing Co., has just added another Victorian style shingle to their selection. The new *Classic II* is a smaller version of the *Classic* (pictured here). Other styles include the *Victorian*

and Fish-Scale shingles. They also fabricate standing and batten-seam roofing. These products are available in copper, terne-coated stainless steel, or Galvalume (a "self-healing alu-

minum-zinc alloy"). Shingles and sheets can be factory finished with your choice of 12 baked-on colors; this optional finish is guaranteed for twenty years against peeling, cracking, or fading.

Patterned metal shingles, in 28-gauge galvanized steel, aluminum, 16-oz. copper, terne, and micro-zinc (a "self-healing" rust proof alloy) can be ordered from Conklin Tin Plate & Metal Co. Prices range from about \$100 to \$500 per square depending on the metal you choose.

Clay Tile Roofing

Say "terra cotta tile" and most people think of barrel or Mission tile. But clay tile roofing comes in many styles and colors, including flat tiles and several different interlocking shingles.

The major U.S. manufacturer of clay roofing tiles since the 1890s is Ludowici-Celadon. They offer nine styles including Spanish, French, and Norman (a flat tile, mottled in color for an aged effect). The average cost for their tiles is about \$225 per square. They will also manufacture custom styles and colors to your specifications.

Gladding, McBean & Co. is another well-established maker of clay roofing tiles, since 1875. They offer two styles, the flat interlocking and the barrel tile, in traditional red or a mottled red color. Prices begin at \$125 per square.

Mission- and Spanish-style clay tiles from Germany are imported and distributed by Midland Engineering Co. They are available in red, black, or brown. Prices range from about \$205 to \$230 per square.

Wood Shingles

Wood shingles, shakes, and fancy-butt shingles are available from sources on both east and west coast. They weigh 200 to 450 pounds per square. Prices on wood shingles depend on the source, wood type, size of order, and market fluctuations. Approximate cost is \$45 to \$92 per square for plain sawn cedar shingles; \$50 to \$138 per square for shakes; \$140 to \$354 per square for fancy-butt shingles. Pressure-treated or fire-retardant shingles can cost up to twice as much.

Reasonably priced hand-split and resawn shakes, up to 16 inches long, and shingles, up to 24 inches long, are sold by Puget Sound Shake Brokers. The manufacturer claims that their roofing is produced from no. 1, old-growth red cedar. Fancy-butt shingles, also in red cedar, are offered in nine patterns.

Red cedar fancy-butt shingles in nine patterns are sold nationwide by Shakertown. Fire-treated shingles may be ordered for an additional charge. This manufacturer also markets shingle panels, individual shingles bonded to a 16-3/4 in. x 48 in. wood backing. The panels are time-saving in installation. They may save labor costs on large jobs, but many carpenter-roofers we consulted have doubts about the relative ability of the panels to expand and contract.

Specialists in ornamental shingles, South Coast Shingle offers seven patterns. They also offer hand-split and resawn shakes, up to 24 inches long, and shingles up to 16 inches long. All shakes and shingles are red cedar; pressure-treated wood is offered.

Most shingles sold today are western red cedar, but Southington Specialty Wood Co. stocks eastern white cedar, up to 16 inches long, as well as red cedar shingles, up to 18 inches long. Hand-split and resawn shakes in red cedar are available in 18-, 24-, or 26-inch lengths.

Post-Victorian Roofing

These modern shingles are nevertheless authentic roofing for early-20th-century houses. And they are more attractive than run-of-the-mill asphalt and fiberglass shingles.

The Twin Lap, Dutch Lap, and Hexagonal are three asbestos-cement shingles offered by Supradur. With a Class B fire-rating, the shingles weigh about 250 lbs. per square. The price range is \$60 to \$90 per square. The Twin Lap comes in seven colors. The Dutch Lap and Hexagonal are available only in black or white.

Two common turn-of-the-century patterns, in fiberglass, are made by Owens-Corning. The Glaslock shingle, under \$40 per square, is available in eight colors. Weight is 235 lbs. per square, and there's a twenty-year warranty. It's available everywhere except California. The French Method is an organic felt shingle that's used for reroofing. It has a fifteen-year warranty, a weight of 150 lbs. per square, and a choice of five colors. The suggested retail price is \$30.15 per square. This

shingle is currently available only in the South and the Midwest.



Above: The elegant look of a house with French Method shingles. Below: Patterns of French Method and Glaslock shingles.





Fire-retardant shingles and shakes can be ordered from Koppers. Shingles and shakes, in red cedar or newly introduced white cedar, are stocked up to 24 inches long; they will do special sizes. Treated fancy-butt shingles can be ordered, also.

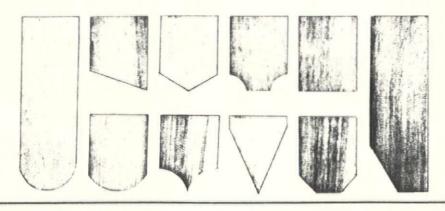
The only source we know of for redwood shingles is Mad River Woodworks. They also offer red cedar shingles; both are 5 inches wide x 16 inches long. Fancy-butt shingles, in ten patterns, and shakes are also stocked. Pictured below are the 10 Victorian patterns of redwood shingles. Top row: Round, Diagonal, Hexagon, Halfcove, Square, and Sawtooth. Bottom row: Fish Scale, Arrow, Diamond, and Octagon.

Eastern white pine shingles up to 16 inches are manufactured by Shingle Mill. They also have fourteen patterns of white pine fancy-butt shingles in 3-, 4-, or 6-inch widths. Custom orders, including those for shakes up to 18 inches long, are accepted.

Hand-split shakes are considered superior to sawn shingles. That's because they're split on the wood's natural grain lines, cutting down on any tendency to split or warp. Some suppliers offer handsplit shakes in stock sizes. But for those of you matching unusual sizes on a historic building, here are two sources for custom orders.

To date, the longest shakes split by Essex Tree Service were 31 inches long. They can produce red cedar shakes and shingles to meet almost any specifications. An average price for a custom tapered 24-inch shake is \$80 per square.

Mr. Thibault and his partner at Homestead Supply will hand-split white cedar shakes up to 16- or 18-inches in length for about \$60 per square. A throwback to the itinerant carpenter, they'll come and split shakes on your site; you supply the wood along with room and board. The charge is no more than \$40 per square. They'll even leave behind two shaving horses.



Roofing Stand-Ins: Simulating Traditional Materials

Wood Substitutes

Let's face it, nothing looks as much like a wood shingle as a shingle made of wood! But fire codes and dissatisfaction with the longevity of today's cedar shingles have led people to look for substitutes that match wood in color, size, and texture. Here are the best of the lot—and please remember: True wood shingles are not overly rough, nor are they laid with staggered butts.

A concrete shake roof tile is offered by Monier in colors called chestnut brown, char gray, and weathered shake. These tiles weigh 950 lbs. per square, and cost \$52.20 per square. They're guaranteed for fifty years.

Terra cotta 'wood' shingles are made by Ludowici-Celadon. Not in their brochures but still available on custom order is the *Georgian*, the actual tile used in Williamsburg. This overlapping shingle tile weighs 1400 lbs./sq. They'll produce widths 2 to 8 inches and take orders for batches as small as 100 pieces. Hip and ridge tiles can be made. Their Williamsburg tile, 8¼ inches wide, is an interlocking tile adapted from the *Georgian*. A square weighs a more average 800 lbs. and costs \$250.

Steel-reinforced concrete tiles made by Hendricks Tile Manufacturing Co. have been used on several historic buildings. Offered in three textures, fine grain (pictured below), coarse grain weathered, and hand-split shake, these tiles are available in 6-, 7-, or 8-inch widths, with an exposure of $7\frac{1}{2}$ inches. They're custom-colored in variants of gray to brown, with your choice of rounded or squared butts. The cost is about \$180 per square. Note: They weigh 1300 lbs. per square.



Hendricks and Ludowici tiles were originally manufactured as imitation wood shingles for historic buildings. They were designed to deceive the eye, and so are as faithful as possible to the look of wood. The asphalt and fiberglass shingles listed below are not imitative in

the same way (not as expensive, either). These manufacturers try to capture 'the color, warmth, and texture of real wood,' not necessarily to fool anyone. As a sympathetic rather than a substitute roofing, these products are quite acceptable.

Several lines of fiberglass shingles designed to imitate wood are produced by Johns-Manville. The top of the line, Woodlands, is a heavy-weight, random overlay tab sheet that gives a three-dimensional effect. It's offered in rustic colors (pictured below, Weathered Bark). In the New York area, Woodlands costs \$72.95 per square.



The *Timberline* is GAF's wood look alike. The heavy-duty asphalt version (330 lbs. per square) is available in the Northern U.S., while a similar fiberglass shingle is sold in the South. They cost \$45-70 per square, and are installed with a lifetime guarantee. You can choose from charcoal-, cedar-, heather-, redwood- or weathered-woodblend.

We don't recommend the stock lines of mineral-fiber shingles currently marketed as wood substitutes. In our opinion, they're overly gross in their representation of wood. Even worse are the metal shakes, whose comically deep and mechanically regular striations are truly awful.

Slate Substitutes

Maintaining a slate roof is a labor of love that'll pay off for you. But putting on a new roof of real slate requires a remarkably long-term commitment to your building: It's very expensive. These sources manufacture roofings that imitate slate. They're both less expensive (one's even lighter in weight). These products have a Class A fire-rating.

With this concrete tile, you'll save money but not weight: A square of Monier slatelike tiles costs about \$65 but weighs a hefty 950 lbs. Its striated color pattern comes in slate, gray, or brown. The manufacturer offers a 50-year guarantee.

A convincing facsimile is Supradur's Supra-Slate (pictured below), which is made of asbestos fibers embedded in cement. We've seen cases where all the salvageable slate on an existing roof was relaid on the street side of a house, and the rest of the roof was covered in Supra-Slate shingles. A slightly myopic OHJ editor even suffered minor embarrassment once when she couldn't tell the difference between the real and the imitation slate from the ground. These mineral-fiber shingles weigh only 500 lbs. per square. The cost is about \$140 per square, and they're guaranteed for 30 years against rot and warping. They are available in four rather convincing slate colors: red, green, black, and gray.



Tile Substitutes

Tile roofing is convincingly imitated in both metal and cement. The galvanized shingle, of course, has to be painted for durability and to make them resemble clay. Metal and concrete shingles were often used even in the 1920s and '30s as substitutes for tile roofing on Spanish Colonial Revival houses and California bungalows.

Two barrel style tiles are fabricated by W.F. Norman in 28-gauge galvanized steel or solid copper. The Spanish is \$124 per square; the slightly larger Mission shingle is \$191.80 per square. Complementing ridge, hip, and valley tiles are offered.

Concrete Mission 'S' tiles are made by Monier in three colors — mission red, terra cotta, and burnt terra cotta. These tiles are a little hefty, 900 lbs., but they are guaranteed for fifty years. The cost is \$47.85 per square.

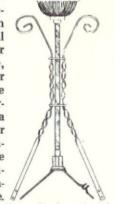
Related Roofing Elements

Lightning Rods

For years, the decorative lightning rod was a thing of the past. But Victorian Reproductions sells the eye-catching rod shown here. They offer two complete kits, but individual parts, including those hard-to-find glass balls, can be purchased separately as replacements or to create your own design.

Model LR101 (shown) is \$59 and 30 inches high, Model LR102 is a combin-

ation weathervane and lightning rod, ranges from \$148.68 \$152.60, stands 5 feet tall. Both models are fabricated from a copper rod with a nickel plated tip, galvanized iron leg braces, topped with a bronzefinished aluminum (star and ornamental glass ball in your choice of red, blue, amber, white, or green. For safety, the rod should be properly grounded. Send a blueprint of your house and this company will design the proper system, including a list of materials, free of charge.



Materials and installation of a functional system will probably cost about \$500 to \$1000.

Gutters

If you can't order traditional wood gutters from your local lumberyard, Windham Millworks can help. They make rounded gutters in Douglas fir for about \$7 per linear foot. Gutters are stocked up to 20 feet long, but they're happy to do custom orders, matching shape, size, and length.

Another source for wood gutters is Mad River Woodworks. They have the capability to produce redwood or red cedar gutters. According to the company, the cost for small replacement sections may be prohibitive for most homeowners.

Most local sheet-metal workers will fabricate gutters for you in the metal of

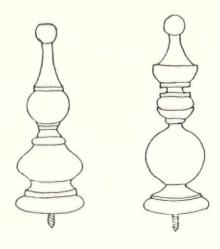
your choice. But if you have difficulty finding someone to tackle your job, A.J. Wagner will custom-make gutters in galvanized metal or copper. We met Mr. Wagner in Chicago last year, and he convinced us that there's no good reason to choose galvanized over copper when you're looking for work that will last. Most of the cost is labor, which is the same regardless of the metal. And the difference in materials is surprisingly small, about \$9/ft. for galvanized and \$14/ft. for solid copper.

Conklin is another source for roofdrainage equipment in a variety of metals. The selection includes half-round and ogee copper gutters.

Wooden Finials

We've recently had quite a few people asking about a source for wooden roof finials. Renovation Products stocks four roof finials. Two are simple, turned, 10-inch high hemlock spires, priced at \$9.99 each (pictured right). The other two styles are more complex, with fretwork

brackets supporting tapered finials. One is 37½ inches high (\$73.50); the other is 16½ inches high (\$68.50). These two are made of a combination of white and yellow pine. Finials can be reversed to act as pendants. The company will also create wooden replacements by custom order. Call for prices and waiting time.



Finials 31/53 and 32/52 are both 3-3/8 inches in diameter and 10 inches high.

Roof Cresting

It's too bad that cast-iron roof cresting rarely got the maintenance it needed, because it's the ultimate Victorian embellishment for a roof.

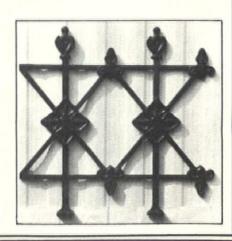
Galvanized steel cresting comes from W.F. Norman; their Style A is shown below. You can order it by 18-foot lengths at \$16 per section. Their selection also includes small gable and hip finials, and ornamental ridge tiles for use with their roofing shingles—nearly extinct bits of decoration!



Above: Block Finial No. 1 with Style "A" Ridge Cresting, available from W.F. Norman.

Right: The "Rosson" pattern, available from Robinson Iron for \$21 per

If your cresting is missing or damaged, Robinson Iron can help. They offer five stock patterns with panel sizes ranging from 17½ to 25 inches tall, and 15¼ to 28¼ inches wide. The iron is preprimed. Prices range from \$20 to \$41 per panel. Matching finials and custom castings are also available.



Address Directory Of Companies Listed

Berridge Manufacturing Company, 1720 Maury, Dept. OHJ, Houston, TX 77026. (713) 223-4971 or (800) 231-8127. Metal shingles are sold through nation-wide distributors. Free brochure.

Buckingham-Virginia Slate Corp., Box 11002, 4110 Fitzhugh Ave., Dept. OHJ, Richmond, VA 23230. (804) 355-4351. High-quality Virginia slate sold through distributors. Free literature.

Conklin Tin & Plate Co., PO Box 2662, Dept OHJ, Atlanta, GA 30301. (404) 688-4510. Metal roofing shingles sold direct. Complete product catalog, \$5; roofing information, \$3.

Essex Tree Service, PO Box 158, Dept. OHJ, Stevenson, WA 98648. (509) 427-5345. Red cedar shakes and shingles in custom sizes sold direct. No literature.

Evergreen Slate Co., 68 East Potter Ave., Dept. OHJ, Granville, NY 12832. (518) 642-2530. Vermont & New York slate sold direct. Also slater's tools. Free brochure.

Follansbee Steel, State St., Dept. OHJ, Follansbee, WV 26037. (800) 624-6906. Standing- and batten-seam metal roofing sold through distributors. Free brochure.

GAF Corp., Building Materials Group, 140 W. 51st St., Dept. OHJ, New York, NY 10020. (212) 621-5000. Asphalt shingles sold through distributors. Free literature.

Gladding, McBean & Co., PO Box 97, Dept. OHJ, Lincoln, CA 95648. (916) 645-3341. Clay roofing tiles sold through distributors. Free roofing brochure.

Hendricks Tile Manufacturing Co., Inc., PO Box 34406, Dept. OHJ, Richmond, VA 23234. (804) 275-8926. Concrete roofing tiles designed to imitate wood are sold direct. Free brochure.

Hilltop Slate Co., Rt. 22A, Dept. OHJ, Middle Granville, NY 12849. (518) 642-2270. New York and Vermont slate sold direct and through distributors. Free brochure.

Homestead Supply, PO Box 689, Dept. OHJ, Wilton, ME 04294. (207) 645-3709. Hand-split white cedar shakes sold direct or made on your site. No literature, call for details.

Johns-Manville Corp., Ken-Caryl Ranch, Dept. OHJ, Denver, CO 80217. (303) 978-2000. Fiberglass roofing shingles designed to resemble wood sold through distributors. Free literature.

Koppers Co., 1900 Koppers Bldg., Dept. OHJ, Pittsburgh, PA 15219. (412) 227-2000. Fire-retardant shingles, shakes, and

fancy-butt shingles can be ordered through your local lumberyard or roofer. No literature.

Ludowici-Celadon Co., PO Box 69, Dept. OHJ, New Lexington, OH 43764. (614) 342-1995. Clay roofing tiles in traditional patterns and imitation wood are sold direct and through distributors. Free product sheets on each style.

Mad River Woodworks, PO Box 163, Dept. OHJ, Arcata, CA 95521. (707) 826-0629. Red cedar shingles and fancybutt shingles are sold direct and through distributors. Specify the "Shingle Brochure," \$1, for details.

Midland Engineering Co., Attention: Hubert Gockel, PO Box 1019, Dept. OHJ, South Bend, IN 46624. (219) 272-0200. A major distributor for roofing products including German clay tiles and Vermont slate, sold through roofers and direct. Free brochures on all products — specify your interest.

Monier Co., PO Box 5567, Dept. OHJ, Orange, CA 92667. (714) 538-8822. Concrete tiles designed to imitate wood and terra cotta are sold through distributors. Free literature.

Mr. Slate — Smid Inc., Dept. OHJ, Sudbury, VT 05733. (802) 247-8809. Salvaged slate is sold direct. Call for details.

W. F. Norman Corp., PO Box 323, Dept. OHJ, Nevada, MO 64772. (417) 667-5552 or (800) 641-4038. Metal shingles in 1908 patterns sold direct and through distributors. Specify "Norman Roofs" for free literature and price sheet.

Owens-Corning Fiberglass Corp., Fiberglas Tower, Dept. OHJ, Toldeo, OH 43659. (419) 248-8000. Turn-of-thecentury style fiberglass shingles sold through distributors. Free brochure.

Puget Sound Shake Brokers, 12301 218th Place S.E., Suite 711, Dept. OHJ, Snohomish, WA 98290. (206) 668-6642. Red cedar shakes and shingles sold direct. Free information sheet.

Renovation Products, 4230 Main St., Dept. OHJ, Dallas, TX 75226. (214) 827-5111. (Note: This is a new address.) Wood finials and pendants are sold direct. A catalog with current supplement is \$2.

Rising & Nelson Slate Co., Dept. OHJ, West Pawlett, VT 05775. (802) 645-0150. Vermont slate is sold direct. Free brochure.

Robinson Iron Corp., Robinson Road, Dept. OHJ, Alexander City, AL 35010. (205) 329-8484. Cast iron cresting is sold direct. Complete product brochure, \$3; cresting literature, free.

Shakertown Corp., PO Box 400, Dept. OHJ, Winlock, WA 98596. (206) 785-3501. Fancy-butt red cedar shingles are sold direct and through distributors and roofers. Free literature.

Shingle Mill, 6 Cote Ave., PO Box 134, Dept. OHJ, S. Ashburnham, MA 01466. (617) 827-4889. White pine shingles and shakes are sold direct. Also fancy-butt shingles. Free brochure.

South Coast Shingle Co., 2220 E. South St., Dept. OHJ, Long Beach, CA 90805. (213) 634-7100. Red cedar shingles, shakes, and fancy-butt shingles are sold direct. Free brochure.

Southington Specialty Wood Co., 100 W. Main St., Dept. OHJ, Plantsville, CT 06497. (203) 621-6787. White and red cedar shakes and shingles sold direct. Free brochure and current price list.

Structural Slate Co., 222 E. Main St., Dept. OHJ, Pen Argyl, PA 18072. (215) 863-4141. Pennsylvania slate sold through distributors. Free brochure.

Supradur Manufacturing Corp., 122 E. 42nd St., Dept. OHJ, New York, NY 10168. (800) 223-1948 or in NY (212) 697-1160. Asbestos fiber embedded in cement roofing tiles designed to resemble slate; also three turn-of-the-century patterns. All products are sold through distributors. Free brochure and samples.

Vermont Structural Slate Co., PO Box 98, Dept. OHJ, Fairhaven, VT 05743. (800) 343-1900 or in VT (802) 265-4933. Vermont roofing slate sold direct and through distributors. Free brochure.

Victorian Reproductions Enterprises, Inc., 1601 Park Ave. South, Dept. OHJ, Minneapolis, MN 55404. (612) 338-3636. Reproduction lightning rods and replacement parts sold direct. Catalog, edition 2, \$3.

Albert J. Wagner & Son, 3762 N. Clark St., Dept. OHJ, Chicago, IL 60613. (312) 935-1414. Custom fabricated gutters in galvanized metal or copper, sold direct in the Chicago area. Will travel for large installations. No literature.

Windham Millworks, PO Box 720, Dept. OHJ, N. Windham, ME 04062. (207) 892-4055. Douglas fir gutters in stock and custom sizes sold direct. No literature.

Remuddling of the month





THIS HOUSE was built in 1893 in Dubuque, Iowa. In 1973, it was damaged in a fire and condemned. Laurence Sommer, of Duluth, Minnesota, submitted these photos; he wrote that "a local real estate developer convinced the City Council that he would preserve and restore the historic house. He purchased ... and 'restored' it as shown in the photograph [below]."

THE TACKY BALCONY and bad fenestration are standard remuddling offenses. But what's truly shameless was the decision to shear off the third storey and leave what looks like a huge plank of plywood on top of the house. That 'alteration' represents the worst kind of penny-pinching and apathy: The developer felt no responsibility to the house or its future inhabitants. The most disturbing aspect of this remuddling is its cynicism.--Cole Gagne





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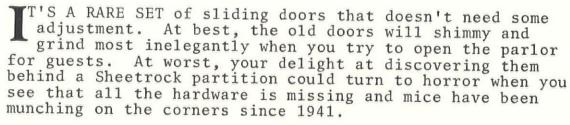
Restoration and Maintenance Techniques For The Pre-1939 House

May 1983 / Vol. XI No. 4 / \$2.

Old-House Journal

The Trouble With Pocket Doors

by Patricia Poore
Illustrations by Jonathan Poore



SOME SLIDING DOORS are top hung. Earlier doors roll along a floor track on recessed rollers. Both types are also called 'pocket doors' because they roll away into pockets inside the walls. This article will deal only with the bottom-track, rolling type. (An upcoming article will explain repairs to top-hung doors.)

OUT-OF-WHACK ALIGNMENT is what makes sliding doors so tedious to repair. There isn't much leeway as each door moves along the metal track and into its hidden pocket.

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Coming in June...
A STENCILLING WORKSHOP IN PRINT

Our Opinion Of 'Peel-Away'

WITH THE VAST AMOUNT of advertising being pumped out about "Peel-Away" paint stripper, we continue to get letters and phone calls asking our opinion of it--even though we made our feelings known in the August 1982 issue.

IN AUGUST, we reported the results of our tests with this self-proclaimed "wonder formula." Our conclusion: Except for some special applications, we don't recommend the product. Trying to keep an open mind, we also asked readers to share their experiences with us. We heard from quite a few people-including the inventor of Peel-Away. After sifting through all the reports, our negative opinion still stands.

THE BASIC PROBLEMS with Peel-Away: (1) The process is quite slow. You have to wait up to 4-6 hours for paint layers to soften. The ad copy leads you to expect speedy results: "Strips away up to 18 coats of paint with one 60-second application." (2) Neutralizing the wood with vinegar is a bit messy; (3) The blanket may not conform to small grooves, causing paint to remain in mouldings; (4) Most serious, the process can damage

fine hardwoods. The stripper is alkaline, and can cause raised grain and discoloration of wood.

THE SAME CAUTIONS we listed in August 1982

listed in August 1982 about consigning fine hardwoods to dip-strippers' vats also apply to Peel-Away. In our opinion, the advertising assertion that the product can be used on "even precious antiques" is VERY misleading.

WE RECEIVED a long letter from the English inventor of Peel-Away, M. I. Dormon-Brailsford. He pointed out that he had developed Peel-Away in response to a stripping problem he faced in his early Victorian farmhouse in Buckinghamshire. He needed to strip 20 thick coats of paint from

the English pine woodwork in his house.

AND IN FACT, stripping paint from softwood woodwork is one of the applications where, based on OHJ tests, Peel-Away may prove satisfactory. Problems of raised grain and discoloration are less serious with softwood.

HOWEVER, we tend to agree with reader Peter Borgemeister of Providence, R.I., who sent us a copy of his letter to the manufacturer of Peel-Away:

"I think your idea is intriguing and has the possibility, with additional development, for becoming an alternative to conventional removers. The product as it is now, however, appears to be over-advertised, fairly primitive, ineffectual, and overpriced, which is sure to disappoint many, if not all, of its users in light of the claims made."

AND SPEAKING of advertising claims, one made by Peel-Away in its promotion is that it is used by The British Museum. So we couldn't resist sharing the letter (reproduced below) that we received at the OHJ offices. --Clem Labine

18 February, 1983



GBM/HCD

Old-House Journal Corporatuon 69A Seventh Avenue, Brooklyn, New York 11217 U. S. A.

Dear Sirs

From a letter which the British Museum has received from the United States of America we understand a product of Dumond Chemicals known as 'Peel Away' paint stripper has received a notice in your December 1982 paint removal chart.

The advertisements for this product which have appeared in the United Kingdom contain a statement that it is used by the British Museum. You may find it of interest to know that 'Peel Away' paint stripper is not used either by the Museum's own staff or, so far as can be ascertained, by the staff of the Department of the Environment, or contractors employed at the British Museum.

We have written to Dumond Chemicals asking them to omit this statement from their advertising but so far have received no reply.

Yours faithfully,

Secretary Secretary

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Post-Victorian Domestic Architecture

The Romantic English Revival

HE ROMANTIC ENGLISH REVIVAL, which flowered in this country from 1900 through 1930, has faded...but not disappeared. To this day you see speculative builders slapping 2x4 "half-timbering" on their cookie-cutter houses, proudly pronouncing the result "Tudor." It's fascinating to learn why the romantic English house has retained a powerful grip on the American imagination.

IT ALL BEGAN with the Queen Anne movement in England in the 1870s. In reacting against what they saw as Victorian excesses, aesthetic reformers proposed a sweeter, simpler lifestyle—and, naturally, a simpler house to live in. The name "Queen Anne" evokes what they saw as a less-complicated, better time: the reign of Queen Anne (1702-1714).

WHEN QUEEN ANNE ARCHITECTURE arrived on North American shores, it underwent a dramatic transformation. The original simple brick house of the early 1700s became, in its 1880s revival, the most dazzlingly complex and ornamental of all the Victorian house styles. The philosophy of Queen Anne simplicity was lost as architects and builders manipulated forms and textures



into ever-more-picturesque compositions. As was inevitable with so elaborate a style, its popularity soon waned. The Queen Anne movement, however, had cultivated a taste for the "Old English" style that lived on, both in England and North America.

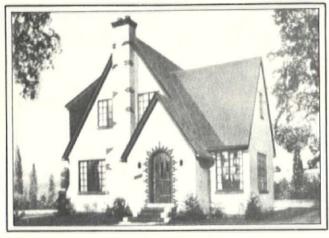
IN ENGLAND, for example, after the turn of the century a whole new style in country houses was developed. These were not the formal Georgian and Baroque estates of the type brought to vivid life in "Brideshead Revisited." Instead, these large houses were designed to be comfortable, rather than to impress. To express the idea of simple, comfortable home life, English architects turned for inspiration to the vernacular houses of the English countryside.

T'S EASY TO SEE why people in England would have a nostalgic attachment to their architectural roots. But why should Anglomania find such fertile ground in America in the post-Victorian era? There are three basic reasons.

ABOVE: This 1920s house in Douglas Manor, N.Y., has many of the hallmarks of the English Cottage Style: Picturesque asymmetry, steep gables, massive slate roof with closed valleys, and a prominent chimney. Windows are cut into the roof in the manner of an English thatched cottage. And lest the viewer miss the point, half-timbering has been added so the house can clearly state: "I'm English."









(top left) This charming English Cottage features many of the basic elements of the style: prominent, steeply pitched slate roof; a sharply pointed gable facing front; relatively few windows—leaving a large expanse of plain wall space; large chimney topped with a chimney pot; and very little roof overhang at the gable ends. Informal landscaping creates the illusion that the cottage sprang from the soil on which it was built. (bottom left) The English Cottage style was often adapted to small, speculatively built houses. Putting the chimney (with its pot) to the front makes it serve as a major architectural feature. The small pointed gable over the front door accentuates the steeply pitched roof. Bricks set

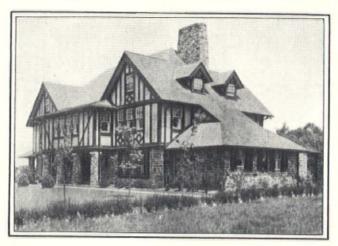
into the stucco create an informal, rustic air. Steel casement windows recall the small-paned leaded casements in the English originals. (top right) Outside walls of this cottage are constructed of common brick laid up in the rough "Old English" fashion. The prominent chimney, steeply pitched gables, casement windows, and large roof area mark it as an English Cottage. (bottom right) This cottage has wood shingles woven in soft curves around the eaves in imitation of thatch. Thatched cottages of the English Cotswolds were the prototype for this squarer type of home. The romantic term "Cotswold Cottage" is often applied to all English Cottages—even those not based on Cotswold prototypes.

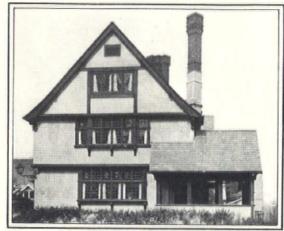
FIRST, there was the desire for the picturesque ("quaint, informal, natural"). This romantic yearning was a hold-over from the Victorian era--but the fantasy had to be fulfilled with forms that didn't look used-up and out-of-date. What could be more picturesque than the cottages of the English countryside? Add to that the half-timbering of Tudor houses, and you have a combination that scores a 10 on the charming scale.

THE SECOND SOURCE of interest in English houses was the Arts & Crafts Movement, inspired largely by the work of William Morris in England. In their search for simple, honest, functional housing, followers of the Arts & Crafts movement turned to traditional English vernacular styles. As Arts & Crafts societies sprang up in America, it wasn't surprising to find English-style houses springing up, too.

HE THIRD REASON for the popularity of English-style houses was their symbolic value. The late 19th and early 20th centuries was a time of great immigration into this country by people for whom English was not a first language. Many of the prosperous families who had been here for generations saw their Anglo-American culture endangered. Building an English-style house was a symbolic way of asserting one's Anglo-Saxon roots.

FOR THOSE WHO DIDN'T have genuine Anglo roots, the English house became a symbol of aspirations. If you were newly arrived in the moneyed class, and wanted to proclaim your cultivation and good taste, an English house provided an instant veneer of respectability. So many newly wealthy people built English houses in the suburbs during the boom times of the 1920s that it gave rise to the derisive term "stockbroker Tudor."









(top left) This large suburban house exhibits the half-timbering that is the hallmark of the <u>Tudor Revival</u> style. The massive textured roof, huge chimney, and numerous gables with decorated verge boards also harken back to the style's medieval origins. (bottom left) The <u>Tudor Revival</u> style could also be adapted to modest cottages. In addition to half-timbering (rendered in an unimaginative fashion), the house also displays a clipped medieval gable and a steeply pitched roof that sweeps low over the house, heightening the English effect. (top right) This elegant rendering of the <u>Tudor Revival</u> style by architect Joy Wheeler Dow shows that half-timbering is not a pre-requisite for the style. There's

only a suggestion of half-timbering in the gable. Instead, the architect relies on soaring chimneys, overhanging storeys, horizontal bands of leaded glass windows, a heavy verge board in the gable, carved wooden corbels, and flared eaves to render a medieval effect. (bottom right) The English Country House style is more sophisticated and restrained than either the English Cottage or Tudor Revival styles. Eschewing obvious picturesque devices such as half-timbering, the style is based on sculptural use of traditional English forms, such as numerous gables and horizontal clusters of windows that leave large unbroken expanses of wall space. Note the almost total absence of roof overhang on the gables.

Tudor Untangled

RYING TO SORT all English building types into a few style categories is an arbitrary exercise. However, for purposes of understanding the romantic English Revival styles, it's helpful to look at three basic types that were used for houses: (1) Tudor Revival; (2) English Cottage; (3) English Country House.

THE TUDOR REVIVAL is readily identified by its half-timbering that proclaims its medieval roots. Sometimes the style is also called "Elizabethan" or, less frequently, "Jacobean." Architectural historian Henry-Russell Hitchcock once used the term "Jacobethan" as a tongue-in-cheek catch-all. Alas, some people are now using the word seriously.

TUDOR is the name of a family, or dynasty, of

kings and queens of England. Henry VIII (1509-1547) and Elizabeth I (1558-1603) were the most famous Tudors. Hence, "Elizabethan" is a subcategory of "Tudor." The two are used interchangeably for half-timbered houses, but we prefer Tudor as the more inclusive term.

"JACOBEAN" derives from the Latin name (Jacobus) for James VI (1603-1625), who succeeded Eliza-

for James VI (1603-1625), beth I. James was the first of the Stuart monarchs--thus, not a Tudor. There is a certain type of brick house with a scalloped gable that is characteristic of Jacobean architecture--but it is quite rare in



houses. That's why you won't find any Jacobean residences illustrated in this general survey-there just aren't that many of them.

How To Design And Construct

Gravel Walks & Driveways

By Dan Maciejak, Landscape Architect, Brooklyn, N.Y.

OMPARED TO the undistinguished sameness of a black asphalt driveway or a concrete walk, a gravel path is a gentle and very appropriate thing of beauty. An old-fashioned gravel walk or driveway carries your restoration beyond the front door, gracing your house with sensitive landscaping. If you enjoy working outdoors, you can create the path yourself, and pay little more than the cost of gravel -- 10¢ to 50¢ per square foot.

UNLIKE CONCRETE AND ASPHALT, crushed stones show unique regional variation. Colors, glint, and smoothness of the aggregate vary. In the geographic area where I practice landscape architecture, clients choose from New Haven basalt, crushed shale from the Hudson Valley, or broken Long Island run-of-bank gravel ... all readily identifiable underfoot.

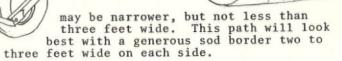
DON'T WORRY about selecting the wrong regional aggregate. Trucking crushed rock over long distances can get pretty expensive, so whatever you can buy locally for a reasonable cost is indeed a local material. (And after that initial cost for the delivered gravel, you'll have virtually no other costs of construction or maintenance!)

RELATIONSHIPS between building elements on your property may have been established and linked by walkways generations ago. In this case, you can concentrate on the removal of inferior or unsuitable pavements. The subcourses often found beneath pavements, such as coke and crushed stone, can readily accept aggregate path surfacing.

IF YOU WANT a new driveway or garden pathway, you have a wonderful opportunity to add a personal statement that is appropriate to both the style of your house and the layout of your property. A little research will reveal a lot. Country villa design, for example, often called for curves and gentle undulations "naturalistic" in concept; most

"naturalistic" in concept; most row housing demanded right angles or broken corners.

FOR A WALKWAY with an important destination, such as the front door or sitting lawn, five feet is generally the minimum width. It provides grace in passage, allowing two people to walk side by side or pass each other easily. A path to a utility area



AT A POINT where pedestrian traffic is minimal, paths may revert to stepping stones or sod. If a good deal of nighttime use is anticipated, such path systems should be free of tripping curbs or edges that allow awkward interfaces between abutting pavements.

THERE ARE A FEW RULES that govern path alignment. Keeping them in mind will help simplify your work.

simplify your work.

• BROAD, GENTLE CURVES are more pleasant to look at than sharp curves. The latter look quite angular from a short distance, particularly if the walker is looking downhill at one. Walkers generally approach such situations with caution.

ALL CURVES that have a continuous rate of curvature are more comfortable to use than those that do not. The walker is generally excited or aroused by a tightening curve.
 REVERSE CURVES should be separated by a short

REVERSE CURVES should be separated by a short straight section, which allows the walker to adjust to the change of direction without toppling off the path.
A LONG CURVE continuing in the same direction

• A LONG CURVE continuing in the same direction should never be broken along the way by a straight section. Such a broken-back curve disrupts the tranquillity of the walker.

LAY OUT THE CENTERLINE of the path by driving stakes five to 10 feet apart. Once you've completed the rough alignment, you can connect the centerline with lime and look it over from different angles until you're satisfied

different angles until you're satisfied with it. Radii can be laid out using a mason's cord or 200-ft. cloth tape and wood stakes. You can proceed randomly with stakes and lime until you discover the alignment that looks good and suits the requirements of the landscape. (Mark path edges by measuring along perpendiculars to the centerline.)

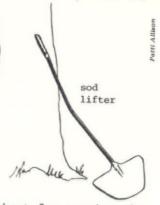
IF YOUR PATH is a series of straight lines connected by gentle arcs, you can easily install wood curbing. Untreated Cedar, Black Locust, and American Chestnut were once used to retain a hard, clean edge.

They're not always permanent, but they last long enough to allow hardening of the path edge so that it always retains a sharp line. (Pressure-treated, 5/4-inch-by-6-inch lumber-CCA--may also be used.)

IF THE WIDTH OR SHAPE of the path varies sharply, wood curbing is less practical than brick curbing or no curbing at all. In the 19th century, brick curbs were set vertically at the edge of paths, particularly where flower beds abutted. They were washed with a watery cement to provide a coating that was first stained with umber or another coloring agent to help match the color of the aggregate. Earthenware edging tiles were also recommended. They were imported from England but appear not to have been in common use.

NEW PATHS can be laid directly on the ground or cut into the ground in such a way that the

finished surface rises slightly above the existing grade, balancing the excavation. In either case, the sod must first be cut and removed. Gasoline-powered sod cutters are available from suburban equipment rentals, but it takes some skill and strength to operate one. If you're working in a hurry on a long path, you may want to hire a machine operator to do the job. Otherwise, a



sod lifter will be sufficient for cutting the grass at the roots in useful pieces.

POWERED SOD CUTTERS remove the existing lawn in neat, continuous ribbons about one foot wide. These ribbons can be stored for short periods (about 48 hours) and reused to provide instant path shoulders. Just take 6-foot lengths and fold them over so that the grass surfaces touch; stack them in a dark, cool place, such as the garage.



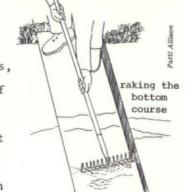
The gasoline-powered sod cutter pictured here is not just a fancy lawn mower, so you may want to hire a pro to operate it. (Note the stakes and cord used here to lay out the width of the path.)

NCE THE SOD has been removed, consider the depth of the pathway. Ultimately, you'll be using the excavated material to build up the shoulders. A frame can be made to hold back the shoulder soil and provide a form within which the loose stone can be deposited. A form eight feet long is easily worked by one person.

CONSIDER THE CHARACTERISTICS of the soil underfoot. Some soils are sandy in nature (such as sandy loams); others are more dense, underlain by sand and gravel. Both have better drainage characteristics than dense clay soils that rest on sand and clay strata or a top hardpan. Take a post-hole digger or shovel and excavate the centerline of the path a foot or two here and there to examine soil properties. The way you construct your path will be determined largely by the drainage conditions of the soil.

ON SANDY SOILS, paths can be more shallow, and comprised of only two definable layers, the base course and the top course. The base

course is comprised of stone up to 1½ inches in diameter. Included in this mix would be smaller stone, some stone dust, and small shards. On dense soils, you will need an additional bottom course of crushed gravel 1 to 3 inches in diameter; this will help drain the path and protect it from frost heave.



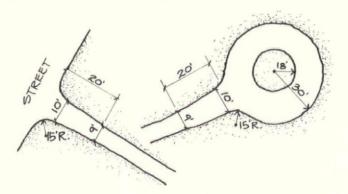
A TOP COURSE of stone dust and screenings can be applied as a finish surface to a depth of 1 to 1½ inches in thickness. These can be rolled down with a Number 12, 240-1b., water-filled tank roller (easily rented from a local garden center).

A DECORATIVE FINISH COURSE may be applied over the top course. Pea gravel or any other round stones have a tendency to migrate rather than compact, so they should not be applied in depths exceeding one inch. An occasional raking (with the back of a garden rake) can restore a uniform thickness and texture to the surface. Different decorative courses include crushed red brick, limestone screenings, and crushed shale; these all tend toward greater stability underfoot. (In conjunction with acid rain, limestone screenings form cementitious compounds that harden and become almost impermeable.)

CROWNING of ¼ to ½ inch per foot is often necessary. It diverts potentially large volumes of water which can otherwise scour the center of the path or tear through adjacent lawn areas. Small amounts of runoff are distributed in sod swales. With impermeable soils, swales can be furnished with four-inch, perforated PVC pipe to return water to the subsoil or outfalls (see drawing on next page).

AGGREGATE PATHS are not durable when slopes exceed 12 to 15%. On such slopes, frequent switchbacks or diagonal alignments are recommended.

TANDARD ROAD RADII apply when designing the entrance driveways and small turn-around areas near the house or garage. All turning radii at 90° corners must be a minimum of 15 feet; circles must have a radius of no less than 18 feet. The width of driveway pavement must be no less than 12 feet. Any roadway should be a minimum of nine feet wide along a straight run, and no less than 10 feet at a point where the car enters the street.



PROCEDURES FOR CONSTRUCTING vehicular entrance drives and pathways vary mainly in the depth of stone bed necessary to bear the different loads. Driveways may be as much as six to 10 inches deep, whereas paths may be as shallow as four to six inches. Some towns demand asphalt or concrete pavements up to 30 feet into the property from the edge of the town road. Though practical in many respects, such ordinances can be an aesthetic nuisance to oldhouse dwellers.

so. When you've established the path edge, cut it with a sharp, flat spade.

SEPARATE the sod from the garden soil. The soil for hackfill should be soil. soil for backfill should be free of clods. THE uncovered subsoil is usually relatively undisturbed, but run the roller over it anyway, to settle it. Don't wet the soil in the cut; cover the site if it should rain.

4 IF you're going to use curbing, lay it in and stake it at this point, or else drop in the frame that will automatically give you the

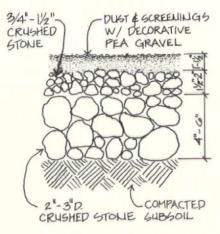
shoulder height and path depth.

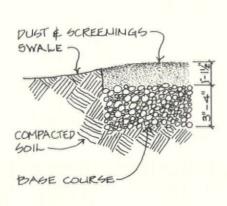
5LOAD your wheelbarrow with aggregate and dump piles as you advance, raking them to conform as you go. Roll down each thinly applied layer of stone with the roller. Apply a light spray of water from time to time to settle the surface, sending smaller particles deeper into the course. Install your crown, This method beginning at your lowest course. applies to any of two or three stone courses laid down.

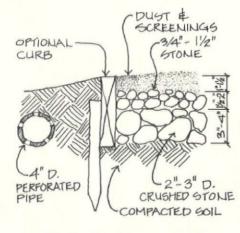
6 IF the top course consists of stone grits and dust, apply it the full 1 to 1½ inches. Then wet it and roll it down until the water is largely displaced.

7 ANY other decorative course may now be applied and raked into place. 8 AFTER raking, remove your frame and proceed along the path.

MOST PATHS constructed in this manner will settle over time, but the settling will be very slight. Additional top course or decorative aggregates may be applied as needed. You ma also find that the paths comprised of stone dust and screenings will be dusty--fine grits may start to adhere to the soles of your shoes







Driveway Section

Path On Sandy Soil

Path On Dense Soil

PHEN PURCHASING STONE, take time to examine it (or else buy from a known sup-Quality can vary greatly from plier). batch to batch. Be sure that the size and color are uniform; try to avoid a high dust content in stone for the middle and bottom courses. Shop around before purchasing the materials, and explain why you want the stone. Buy in convenient volumes by the cubic yard, and measure volume when it's on the truck in a rectangular compartment, not when it's on the ground in a heap.

HERE'S a practical order of work to follow: 1 EXCAVATE the path along a length that can be easily worked in the course of a weekend or

and get tracked into the house. This nuisance persists for only a few months; afterwards. the path's components for the most part adhere to themselves, cemented together by dust and fines washed down through the aggregates.



Almost every old-house owner sooner or later faces the job of refinishing wood. But most articles (including our own) concentrate on techniques and overlook the materials. For example, when's the last time you read a simple explanation of the many different kinds of sandpaper that are so commonly available? In this article, Steve Wolf sorts out the vast subject of fine abrasives.

TRUE GRANT

By Stephen L. Wolf, President, Wolf Paints And Wallpapers

HE TERM "sandpaper" has become a misnomer.
Years ago, sand was indeed the primary
abrasive, but no paper is made with sand
today. There are now four main categories of
abrasives:

• FLINT PAPER--This material is closest to sand, both chemically and in appearance. It's also the cheapest of all the sandpapers, cutting slowly and wearing down all too quickly.
• GARNET PAPER--Made of finely ground garnet, reddish in color, it's used both for smoothing raw wood and in finishing operations.

 ALUMINUM OXIDE--Unlike the first two, which are natural, this abrasive is synthetic. Grayish-brown in color, it's harder than garnet and cuts more quickly--which can be a disadvantage on soft woods. It is, however, the most all-purpose of the papers.

• SILICON CARBIDE--This is also a synthetic material, one commonly referred to as "Carborundum." Black in color, it's the hardest of the abrasives. It's made with a waterproof backing and is most commonly used for the final finishing of painted, varnished, or lacquered surfaces, with either neutral oil or water as a lubricant. (Silicon carbide is commonly sold as "wet-or-dry" sandpaper.)

ANDPAPERS, of course, come in varying grits, or particle sizes. Classification can be somewhat confusing because there are several different systems for denoting grit. Any one, possibly all, of the following systems are marked on the back of the paper. (But not all the types of paper are available in all the grits.)

THE SIMPLEST SYSTEM uses a word gradation: Extra Fine, Fine, Medium, Coarse, and Extra Coarse. Sometimes this is further simplified into only three grades: Fine, Medium, and Coarse. A more accurate system--which nevertheless is now used less and less--employs a numerical system roughly parallel to the one used to describe the coarseness of steel wool. Starting at 3 for the coarsest, it proceeds through 2 and 1 for finer grades to a series of 0, 00, and 000, all the way up to 12/0 for extra fine.

THE MOST COMMON SYSTEM of classification now in use numbers the paper according to the number of particles per square inch on the paper. There are approximately fifteen standard clas-

sifications in this system, ranging from 30 for the coarsest to 600 for extra fine. A 60-grit paper is probably the coarsest needed for refinishing woodwork and furniture. Other standard grits are 80, 120 (Medium), 180, and 220 (Fine).

THE OTHER IMPORTANT PART of any sandpaper is the backing used. Paper backings come in various weights, designated A (lightest), C, D, and E (heaviest). E papers are used mostly for machine sanding; D and C, designated "Cabinet Papers" for the initial sanding of raw wood; and A type for light sanding and finish smoothing between coats.

IN ADDITION, there's a type of abrasive, primarily emery, which is backed with cloth. This "emery cloth," while not commonly used to sand wood, is useful because of its flexibility in sanding odd-shaped pieces such as turnings and carvings.

THE TERMS "open-coat" and "closed-coat" are commonly used in describing abrasive papers. In closed-coat, practically 100% of the paper is covered with abrasive; in open-coat, only 60 to 70% is covered. Open-coat is most often used for wood because it tends to clog less.

Other Abrasives

N MANY OPERATIONS, you can substitute steel wool for sandpaper--for example, in the fine sanding between coats of a new finish. It's also useful for intricate surfaces, such as carvings and mouldings. Steel wool grades start at 3 (coarsest) and go through 4/0, or 0000 (finest). Grades 0, 00, and 000 are most commonly used in refinishing wood.

PUMICE POWDERS, made from ground-up volcanic lava, come in a number of grades, from 1 (coarsest) through 0½, F, and FF. FFF and FFFF are also produced but may be difficult to ffffind. These very fine powders are used to polish the final finish. A soft cloth or padded piece of felt (known as rubbing felt) is dipped in either mineral oil or water. The pad is then dipped in the pumice powder and rubbed over the surface in a straight back-and-forth movement, one section at a time. By

starting with the coarser grades and going to the finest, a high polish can be developed.

ROTTENSTONE is the finest powder of all. It's applied in the same manner as pumice, using only soap and water as a lubricant. Normally used only on the finest furniture finishes, rottenstone produces a high shine, with beautiful depth.

RUBBING COMPOUNDS come in paste form and are used extensively in automotive refinishing. They are applied with a pad or felt. The compound cuts when wet, smoothing the surface; as it dries out, it polishes.

Sanding Basics

OR FINE WOODWORK, stay away from belt and disc sanders; both remove too much wood and are hard to control. If you have a lot of sanding to do, you may want to invest in a power finishing sander. It comes in two basic types, orbital and straight-line. Both use a vibrating motion: orbital sanders in small circles; straight-line sanders, a straight back-and-forth motion. Some sanders combine both motions.

IF YOU DON'T HAVE enough sanding to warrant the purchase of a power sander, or if you need to reach places that the power sander can't go, you'll need a sanding block to hold the

USE TYPE OF PAPER NUMBER Very Coarse No. 2 - 36DAluminum Oxide Shaping Coarse Aluminum Oxide $1\frac{1}{2} - 40D$ Garnet Cabinet Shaping Aluminum Oxide 1 - 50DGarnet Cabinet 1 - 50DMedium 1/2 - 60D Aluminum Oxide Garnet Cabinet $\frac{1}{2} - 60D$ Wet-or-Dry 1/2 - 60C (Silicon Carbide) Rough Aluminum Oxide 1/0 - 80DSanding 1/0 - 80DGarnet Cabinet Wet-or-Dry 1/0 - 80C(Silicon Carbide) 1/0 - 80AGarnet Finishing

sandpaper. There are many different types available, usually 3 in. x 5 in., designed to hold a quarter of a sheet of paper. The best of these are made of hard rubber and hold the sandpaper with small teeth at the ends of the block. You can also easily make your own blocks out of wood cut to a convenient size and faced with either felt or cork. A blackboard eraser, with the paper held by tacks at the ends, also makes a fine sanding block.

How To Use Sandpaper

HEN USING SANDPAPER, always keep two principles in mind: 1) Start with the coarser grades and gradually work down to the finer, and 2) sand in a straight backand forth motion with the grain, to avoid scratching the surface. For the first sanding, either a garnet or aluminum oxide paper of medium or fine grit is recommended: 100C or 120A. The finer grit should be used on soft woods such as pine; slightly coarser grit on harder woods such as oak. Move progressively to finer papers, finishing finally with a 320A to 600A (depending on how much of a perfectionist you are).

CLEAN ANY SANDY RESIDUE from the surface between each sanding, both so you can see what you're doing, and to get rid of any particles left from the coarser paper. This cleaning can be done with a vacuum, dust brush, or-preferably--a tack rag, which can be purchased

NUMBER	TYPE OF PAPER	USE
	Fine	
2/0 - 100C	Aluminum Oxide	
2/0 - 100C	Garnet Cabinet	
2/0 - 100C	Wet-or-Dry (Silicon Carbide)	
2/0 - 100A	Garnet Finishing	
3/0 — 120C	Aluminum Oxide	
3/0 — 120C	Garnet Cabinet	
3/0 - 120C	Wet-or-Dry (Silicon Carbide)	Intermediate Sanding
3/0 — 120A	Garnet Finishing	
4/0 - 150C	Aluminum Oxide	
4/0 - 150C	Garnet Cabinet	
4/0 - 150C	Wet-or-Dry (Silicon Carbide)	
4/0 - 150A	Aluminum Oxide	
4/0 - 150A	Garnet Finishing	

at paint stores. It consists of folded cloth made tacky with a little linseed oil and varnish. You can also make your own tack rag by dampening a soft cloth with varnish cut with a small amount of turpentine.

WHETHER THE FINISH is to be clear or painted, the finish material should be applied in a series of built-up coats. Sanding must be done between each coat, and don't forget the tack rag. Grits from 320A on up--or 4/0 steel wool--are appropriate for this stage of the work. For an extremely smooth finish, wet sanding with silicon carbide paper is recommended. Make a solution of Ivory Liquid and water. Dampen the wet-or-dry sandpaper with this solution to lubricate the sanding process. Pharmaceutical quality mineral oil can also be used, although it can leave a slightly oily surface that could interfere with succeeding coats.

RUN YOUR FINGERS over the surface to determine which areas need additional attention. Your sense of touch will tell you far more than your eyesight can here. For a fine, highly polished surface, rub the final coat with pumice or rottenstone, as described above.

Sanding Tips

NE EXCEPTION to the "sand with the grain" rule: In order to achieve a perfectly smooth surface, some finishers purposely raise the grain of the wood. When such a surface is sanded, it should be done at a slight angle to the grain so as to shear off the raised grain.

RAISING THE GRAIN may be accomplished in several ways. One is by applying hot water with a damp cloth; this swells the wood slightly and raises the grain. The second--and preferred--method uses a wash coat of shellac. Standard 4-lb. cut shellac (4 lbs. shellac gum to a gallon of alcohol) should be mixed 1 part shellac to 2 parts alcohol. White shellac is used here to avoid discoloring the wood. A sanding sealer, usually a lacquer formulation, is also effective for this purpose.

NUMBER	TYPE OF PAPER	USE
	Very Fine	
5/0 — 180C	Wet-or-Dry (Silicon Carbide)	
5/0 — 180A	Aluminum Oxide	
5/0 — 180A	Garnet Finishing	First
6/0 - 220A	Aluminum Oxide	Finish Sanding
6/0 - 220A	Garnet Finishing	
6/0 - 220A	Wet-or-Dry (Silicon Carbide)	

WHEN SANDING carvings or mouldings, be careful to stay away from the edges; they should be left clear and sharp. Carelessness at this stage can permanently ruin the original appearance of a fine piece. The same goes for the edges of boards, which should be touched up only with the finest sandpaper. To avoid scratching, end grain should also be sanded only with extremely fine paper.

SMALL HOLLOW SURFACES, or the flutes of columns, can be sanded by wrapping sandpaper around a dowel of the appropriate curve.

Turnings can best be sanded by cutting narrow strips of emery cloth, holding the cloth at either end, and pulling it with a back-andforth motion around the turning and into the grooves. Steel wool is also useful for this.

BEFORE USING SANDPAPER, you should make it more flexible by running it, paper side down, over the edge of the work bench. When cutting strips of sandpaper, place it abrasive side down and cut it with a sharp knife, or score it by folding and then tear it on a good straight-edge.

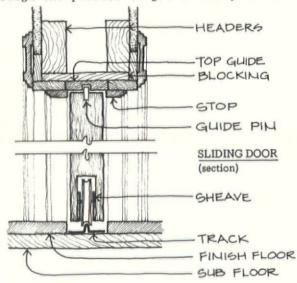
IF THE SANDPAPER you're working with is not cutting properly, don't throw it away. The problem may be clogged accumulations of wood flour between the grains of grit. Go over the paper with a nail or scrub brush. Even accumulated deposits of old finish can be removed by dipping the brush in the appropriate solvent and then allowing the paper to dry before you reuse it.

NUMBER	TYPE OF PAPER	USE		
	Extra Fine			
7/0 240A	Garnet Finishing			
7/0 — 240A	Wet-or-Dry (Silicon Carbide)	Final		
8/0 - 280A	Garnet Finishing	Sanding and		
8/0 280A	Wet-or-Dry (Silicon Carbide)	Sanding Between Coats		
9/0 - 320A	Wet-or-Dry (Silicon Carbide)			
E	xtra, Extra Fin	e		
360A	Wet-or-Dry (Silicon Carbide)			
10/0 — 400A	Wet-or-Dry (Silicon Carbide)	Rubbing Down the		
11/0 - 500A	Wet-or-Dry (Silicon Carbide)	Final Finish		
12/0 - 600A	Wet-or-Dry (Silicon Carbide)			

pocket doors continued from page 79

Building settlement -- all too apparent over the span covered by a set of double doors and pockets -- is usually to blame for bad alignment. If you're lucky, you'll simply have trouble with hardware or debris on the track.

BECAUSE ALIGNMENT of the doors and framing is so affected by settlement in the building, you'll want to hold off on repairing the doors until all structural work is finished, including joist or subfloor repairs, foundation work, and any kind of jacking. On the other hand, better fix your pocket door problems before you get to finish plastering or decorating, because a few repairs will require breaking through the plaster to get at the pocket.



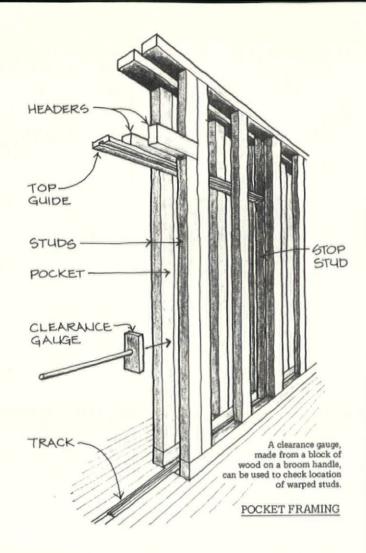
REPAIR GUIDELINES are given below according to symptom. But a symptom can have different causes -- and the reason why your door is sticking is sometimes hard to figure at first. It's a good idea to read the whole article before attempting diagnosis and repair.

I. A DOOR IS STUCK IN ITS POCKET.

A. Unused doors may be nailed into their pockets! Look for toenails through the door edges, or a stop piece nailed across the top.

B. The doors might be warped. If handle hardware is missing, attach a temporary handle. (Thread some heavy wire between two screw eyes set a foot apart into the edge of the door.) Pull gently, rocking the door. Use force if necessary, though it may damage the door. If it's hopelessly stuck, go through the plaster, then wedge studs apart to free the door. Afterward, if doors are salvageable, try shaving down the studs to provide clearance.

C. Studs in the pockets might be warped. If the closest set of studs is binding the door, try pushing one back by inserting a wedgeshaped piece of wood between it and the door. Trouble with rear studs means you'll have to go through the wall. Warped studs should be shaved with a drum rasp attached to your drill.



D. If debris is clogging the track, lift upward on the door, rocking it and pulling the door forward inch by inch. While a helper lifts up on the door, insert a metal rule underneath to scrape away debris. A flashlight helps.

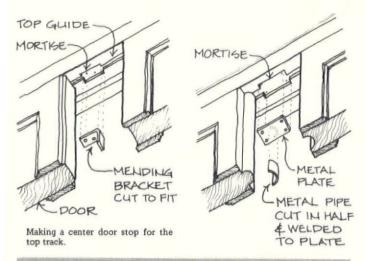
E. If the door has jumped the floor track, lift and rock the door to get it back on track.

F. The door may have left the top guide inside the pocket. Wiggle the door around to get it back on center. Poke a rule in along the side to guide the door out. Force it if you dare.

II. DOUBLE DOORS ROLL OUT BEYOND THE CENTER, SO THAT REAR OF DOORS ARE VISIBLE.

A. The metal stop piece at the top center of the door opening may be missing. For doors that fit together tongue-in-groove, get a steel mending angle, cut down one of its legs so it just meets the top of the door, and screw it into the center top track. If the doors have rounded edges, use an appropriate size piece of pipe, cut in half and welded to a metal plate. See drawings on the next page.

B. The building may have settled so much that the door is now running below the level of the top groove. BE CAREFUL: The door could actually flop out of the opening from the top.
You'll have to add to the depth of the stop mouldings which form the top track. See the drawing under problem # V. on the next page.



III. THE DOORS WON'T SLIDE ALL THE WAY BACK INTO THEIR POCKETS.

A. Could be debris on the track. Use a longhandled broom or a vacuum cleaner crevice attachment. Look for source of debris, perhaps a buildup of broken plaster keys on stud bracing.

B. Again, the door itself might be badly warped. In some cases, shaving down the studs will provide enough clearance. If warpage is severe, you'll have to get a new door.

C. Check for warped studs with the clearance gauge described on the previous page.

D. The door may be chronically off the track. Clean the track; see if it was mislaid or not screwed down inside the pockets.

E. Maybe the top guide is the problem. See solution under 'F.' on the previous page.

IV. THE DOORS BIND ON THE TRACK, GET BALKY, OR MAKE NOISE TRAVELLING.

A. Debris inside the pockets may still be falling on the track. Inspect with a flashlight.

B. Recessed rollers in the door bottom may be rusty or dirty (clean and oil them), out of alignment -- or broken or missing. Take heart! We found a source; see box, above right.

To remove a pocket door so you can work on the rollers, have a helper push up on the door



while you swing it out at the bottom. In rare cases, you may have to remove the stop mouldings.

C. Another reason for balking may be severe floor settlement or sags and bumps. See ahead.

V. THE TOP OF A DOOR IS NO LONGER RUNNING IN THE GROOVED TRACK.

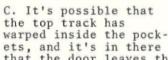
A. Stop mouldings at the top of the door opening may be missing. Careful: Door can fall over.

B. House settlement may be so extreme that the doors are now running below the level of the top guide. (1) Add to the stop mouldings in

Source For Rollers & Track

From GRANT HARDWARE COMPANY'S Sliding Door Hardware Catalog, the no.1415N Sheave is a good replacement wheel. Overall length: 6 in. Height: 3½ in. For doors up to 200 lbs., minimum door thickness 1¼ inches. You can also order their bronze, no. 14 Sheave Track. Grant Hardware Co., 20 High St., Dept. OHJ, West Nyack, NY 10994. (914) 358-4400. Ask them to direct you to a local distributor.

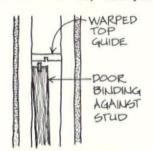
an inconspicuous way.
(2) If the top of the door has guide pins, you might want to increase their length. Use wood dowels. (3) Sometimes the bottom track can be shimmed up to alleviate settlement. Too much shimming, though, will cause people to trip on the bottom track.

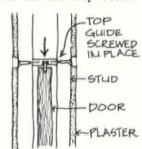


ADD TO STOP MOULD

INSTALL

ets, and it's in there
that the door leaves the top guide and binds
-- not an easy condition to fix. Move the door
out of the way and pull down on the top board

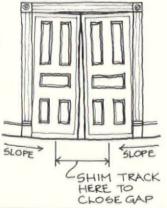




that forms the upper guide. (It's awkward.) Fasten the board where you want it by screwing it through a small hole you've made in the wall plaster, through a stud, and into the board.

A door affected by building settlement will never work 'just like new.' Concentrate on getting them to roll smoothly and meet flush in the center of the opening.

VI. DOUBLE DOORS ARE OUT OF PLUMB, SO THAT A SPACE, WIDER AT BOTTOM, IS LEFT BETWEEN THEM.



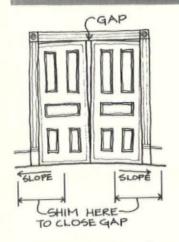
A. This condition is caused by a pronounced sag in the floor, so shimming a little bit here, a little bit there will have to do. Try taking up the center floor track and shimming beneath it. Too much shimming of the track will make people trip.

B. If yours is a single pocket door, or if the doors are only slightly out-of-plumb, try inserting a shim between the roller case flange and

the bottom of the door. Shim only the roller that's closer to center. Use different size shims on each side of flange to bring the sheave parallel to the exist-ing angle of the floor track. Too much shimming by this method will = create a very visible gap under the door.



VII. A SPACE, WIDER AT THE TOP, IS LEFT BETWEEN THE DOORS WHEN THEY ARE CLOSED.



A. Barring a serious structural condition that could cause the floor to buckle, the probable cause is the inevitable settlement sag. So again, try shimming. This time, shimming. This time, shim the track not in the center, but out toward the pockets.

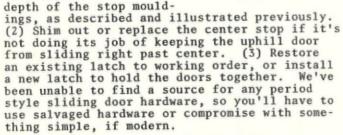
B. Shim between the roller sheave and the mortise in the door, this time on the roller closer to the pocket. See drawing above.

SLOPE

VIII. THE DOORS ARE OUT OF PLUMB, BOTH SLOPING IN THE SAME DIRECTION.

A. Differential settlement between the outside of the building and the interior walls is often the culprit here. The condition can be alleviated, but not really fixed. Creating a level track on a sloped GAP floor will simply result in a raised track to trip over.

Therefore: (1) Be sure that the top guide is doing its job along the entire length. You may have to add to the



B. When the doors are open, the uphill door will always be rolling into the opening. When the doors are closed, the downhill door will always be rolling back into its pocket. There's not much you can do about it, so treat it as an endearing characteristic of your old house: Rather than muttering and stuffing cardboard

between the doors and frame to hold them in place, make a finely finished hardwood wedge to match the doors, and use it with panache.

IX. THE FLOOR TRACK IS MISSING OR UNSALVAGEABLE.

A. Sometimes, the track is unsalvageable or missing ... but the rollers are fine. possible that new track won't match up to the existing rollers. ad-hoc method of making track is shown here.

Purchase flat stock (mild steel) and drill holes down the center. Use steel rod of a diameter that matches up to the groove in the Tack-weld the rollers. rod onto the flat plate

from behind, through the holes. Now drill countersunk screw holes into the edges, for installation in the floor. You may be able to talk a local welding shop into doing all this REMOVE BASE-

for you, but expect them to grumble. B. You can buy new

COUNTERSUMK

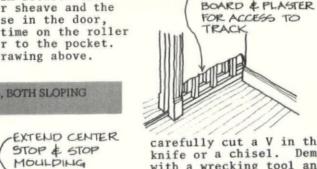
FLAT GTOCK WITH HOLES DRILLED FOR TACK WELDS

FROM BACK

STEEL ROD

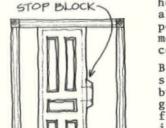
track and matching rollers. See p. 91. C. To gain access to the floor track inside the pockets, it's necessary to demolish the plaster and lath only near the floor. Remove the baseboard, and

carefully cut a V in the plaster with a utility knife or a chisel. Demolish the lower plaster with a wrecking tool and pull off the lath. You need only enough clearance to use a screwdriver in the space.



X. A DOOR GOES TOO FAR INTO ITS POCKET.

A. Something should stop the door inside the pocket; see the framing drawing on page 90. Sometimes there's a stop stud in the center If this is the case back of the pocket. the stop block attached to the back of the door may be missing. Replace it as shown



Pull the door here. all the way out of the pocket by removing the metal stop piece at the center of the top guide.

B. Other doors are stopped in the pocket by a cross brace that goes across the pocket from stud to stud. it's missing, you'll have to open the wall 鯒 to replace it.

SPECIAL THANKS to the OHJ subscribers who contributed know-how to this article - and especially Dave Woods of Poughkeepsie, New York. Dave is a rehabilitation contractor with a special passion for getting pocket doors rolling again.

Helpful Publications



Books on regional architecture are rarely of interest to people not in that area. Here are four recent books with wider-than-usual appeal.

- Reviews by Robin Sanders

Plantation Homes of Louisiana and the Natchez Area

David King Gleason

1981 (134 pp., profusely illustrated) Cloth

USING 120 memorable color photographs, David King Gleason takes us on a tour of the plantation homes which once flourished along the Louisiana waterways. The plantations were photographed as they now stand. Most still recall the pride and glory of the Old South, but others have been left to ruin, decayed fragments of a bygone era.

THE BOOK offers an introduction to Southern architecture in general, besides specifically discussing each plantation. Large color photographs present their impressive exteriors. Truly, it is the visual quality of this book which makes it invaluable to anyone interested in plantation homes, Louisiana, Southern architecture, or the Old South.

To order, send \$29.95 (postage included) to: Louisiana State University Press Order Department Baton Rouge, Louisiana 70803 (504) 388-8271

The Cape Cod House: America's Most Popular Home

Stanley Schuler

1982 (144 pp., profusely illustrated) Cloth

THE CAPE COD HOUSE has been an American tradition for over 300 years. The transition from the small half Cape cottages of the seventeenth century to the large full Cape houses of today is the subject of this book.



WITH ITS MANY plans and photographs and its refreshingly unacademic text, this book will interest all of us who have been charmed by Cape Cod houses themselves. There is even a discussion of the different lifestyles of the occupants. But most of all, this book is a treasure for those restoring, living in, or building their own Cape Cod home.

To order, send \$25.00 plus \$1.50 postage to: Schiffer Publishing, Ltd. Box E Eaton, Pennsylvania 19341 (215) 696-1001 The Georgia Catalog: Historic American
Buildings Survey
John Linley
1982 (402 pp., generously illustrated) Cloth
and Paper

FROM ANCIENT rock formations to the architecture of contemporary Georgia, this is truly a thorough catalog of that state. Most of the book is a history of Georgia's architecture. Each chapter addresses the influence of climate, ecology, landscape, and city planning on different periods of Georgia's architecture. The book includes a town-by-town listing of the Historic American Buildings Survey for the state of Georgia.

THE GEORGIA CATALOG also contains a glossary of architectural terms, and listings of the National Register of Historic Places, National Historic Landmarks, and the Historic American Engineering Record. Photographs, maps, and drawings are all incorporated to make this a very comprehensive text suitable for any architectural library.

To order, send \$35.00 plus \$1.09 postage for cloth-covered edition or \$17.50 plus \$1.09 postage for paperback edition, to:

University of Georgia Press Terrell Hall Athens, Georgia 30602 (404) 542-2830

Oklahoma Homes Past and Present Charles R. Goins and John W. Morris 1980 (269 pp., profusely illustrated) Cloth

THE HOMES OF OKLAHOMA are as varied as the climate and topography of the state itself. From tipis to solar houses, Oklahoma has all sizes and types of houses. Using lots of photographs, some color, over 375 houses are covered in this volume. The buildings are listed according to style. A brief history of each style is included along with information about the individual homes. Those houses which are listed in the Historic American Buildings Survey have been noted, as have houses which are open to the public.

"IT IS THE HOPE of the writers that you will take the time to drive through the residential areas of towns and cities, as well as the rural sections, and look at the variety and beauty of the homes in the state."

IF YOU DON'T have the time or means to drive through Oklahoma, this book will bring a part of Oklahoma to you.



Reaching High

Somewhat esoteric, a rolling library ladder is hard to find. Quality oak ladders are custom-made by Putnam, un-

finished or stained, with a variety of hardware finishes. (For an additional charge the ladder can be made of any hardwood and stained with any Minwax finish or matched to an existing sample.) The standard ladder, 16 in. wide and 8 ft. 11 in. high, is \$169; the basic track is \$2.50



per ft. Ladder assemblies can be made to fit almost any circumstance: Curved rails are available, as are bends for going around protruding cabinets. For information about these and other wood and metal ladders, request catalog no. 650, \$1. Putnam Rolling Ladder Co., Inc., Gregg Monsees, 32 Howard St., Dept. OHJ, New York, NY 10013. (212) 226-5147.

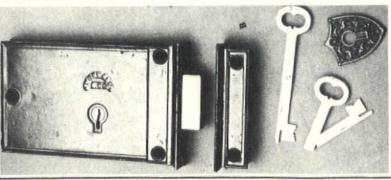
If you've a small library or perhaps a single tall bookcase, you might find Yield House's ladder-chair more sympathetic to the room than stocky, metal rolling stools. Made of maple, this chair unfolds to a 36-inch-high step-stool. It's available unfinished, \$119, or stained dark pine, \$149. (Shipping and handling is \$8.) Their color catalog is free. Yield House, Inc., Dept. OHJ, North Conway, NH 03860. (800) 258-4720.



Hardware Cache

Initially a fine tool business, Lee Valley is now offering antique hardware, most of which is in pristine condition. The company's owner has spent three years collecting caches of old hardware. Result: What might be the largest, and certainly one of the most interesting, collections of unused hardware in North America. A 40-page color catalog has about 650 items: commercial exit 'panic' hardware, c. 1914 (\$135); cast-iron Victorian door hinges (\$40/pair); springloaded umbrella clips (\$7.50 each); a mechanism for opening exterior shutters from the interior (\$60); several sizes of a unique rim lock with a folding key (\$76 to \$125); and much more.

Most of the hardware is from 1850 to World War II. Specific dates, if a reference can be found, are given in the catalog. Prices are quoted in Canadian dollars, so a refund is given on the exchange rate for U.S. funds — a saving of about 20%. Items are shipped parcel-post to the U.S.; the duty is about 5%. The catalog is \$1. Lee Valley Tools, Ltd., 2680 Queensview Dr., Dept. OHJ, Ottawa, OT Canada K2B 8J9. (613) 596-0350.



A rim lock with folding key from Lee Valley.

Overhead



custom oak ceiling.

Best known for their fanciful fretwork, Cumberland has just introduced Victorian ceiling treatments. The solid oak ceilings are designed to your specifications. Choices include raised panels, moulded or plain beams, and additional decorative elements such as corbels. Costs are about \$15 per sq.ft. up to about \$50 or more per sq.ft. A 24-page color catalog showing their full line of millwork is \$3.50. Cumberland Woodcraft Co., Inc., 2500 Walnut Bottom Rd., Dept. OHJ, Carlisle, PA 17103. (717) 243-0063.

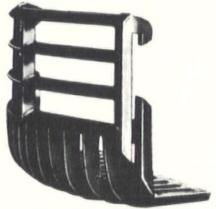
Odor Riddance

Having a problem with odors from a previous resident's pets? Mateson Chemical Corp., a disaster restoration specialist, sells products designed to sterilize and kill odors. Their Sweet-Pea Pet Corrector can be used on carpets or wood floors without damaging the surface. The product, used with a wet/dry vacuum, will pull out many stains. (Note: If uric acid has caused the wood to darken, it will have to be bleached. The acid may have also caused the fabric dye to irreversibly fade.) If your odor problem is severe, GGR, a booster, can be added to the diluted Sweet-Pea solution. In addition, they offer Damp Rot Deodorant for fabrics, e.g., curtains and furniture, as well as Sweet-Pea Kennel Cleaner, an extra-strength chemical for use on masonry. Sweet-Pea Pet Corrector is \$2.50/ gt.; GGR booster is \$5.50/gt.; Damp Rot Deodorant is \$6.50/qt.; and Sweet-Pea Kennel Cleaner is \$5/qt. Product literature is free, and they'll be happy to advise you on your specific problem. Mateson Chemical Corp., 1025 E. Montgomery Ave., Dept. OHJ, Philadelphia, PA 19125. (215) 423-3200.

Return To Candlelight

In many period parlors, electric lights may seem harsh compared to the original gas lighting. But you can create a similar effect by converting your electric fixture to candlelight. The candle convertor is a four-inch-high, glass-cup candle holder that fits into a candelabra base socket. We tried one; it isn't a pretty piece of glass, but it looks and works just fine up in a chandelier. They're \$4 each; an additional convertor for fitting larger sockets is \$2.50 extra. For a free brochure, write Abbington Importers, Inc., 133 E. 58th St., Dept. OHJ, New York, NY 10022. (212) 838-0645.

Cast Coal Grates



A round hanging basket grate

It hasn't been easy to find reproduction cast-iron fireplace grates for burning coal. But recently, Hearth Realities began casting three different grates in period styles. The tile hanging basket, designed to fit a 9-inch deep fireplace, comes in an 18-inch length, \$75, and a 20-inch length, \$77. The round hanging basket fits even the narrowest fireplace with widths of 12 to 24 inches. Prices are \$68 to \$85. The common square hanging basket is made for sloped-back fireplaces. Widths range from 14 to 24 inches; cost is \$72-79. Shipping and handling charges are included in the prices. They also have an extensive selection of original replacement parts, surrounds, screens, grates, etc. Further product information and measuring instructions are free. Hearth Realities, 246 Daniel Ave. S.E., Dept. OHJ, Atlanta, GA 30317. (404) 373-7493.



The 'tile grate' was used with reflective tiles embedded in the firebox. Ask for measuring instructions before ordering.



A bevelled transom from Cherry Creek.

Bevelled Windows

As one of the only production plants turning out individual bevelled-glass pieces, Cherry Creek has unrestricted design capability. They've been hand-making high-quality, leaded, bevelled-glass windows for nine years, and now have a staff of more than forty people. Stock prices for leaded, bevelled windows are \$30 to \$150 per sq.ft.; custom designs are \$200 to \$1000 per sq.ft. Cherry Creek will give you the name and address

of one of their distributors who can supply you with individual bevelled pieces. If you have a window with just one or two missing pieces (and are willing to pay custom prices), they will hand-bevel a replacement from your cardboard template. The cost is \$.95 per linear inch (the outside perimeter, i.e., a 3-inch square would be \$11.40.) A window brochure showing their stock patterns is free. Cherry Creek Enterprises, Inc., 937 Santa Fe Dr., Dept. OHJ, Denver, CO 80204. (303) 892-1819.

Traditional Lace

We're often asked about a source for Victorian lace curtains that are better quality and more authentic than department store curtains. Rue de France offers seven traditional patterns, most of which are 100% acrylic.

Stock sizes range from 36 in. to 72 in. long. These even come in narrow widths, 8 to 12 in. wide, for sidelights! A panel 35 in. wide x 72 in. long is \$35.50. Custom sizes are available; fabric and trim can be purchased by the yard. A mail-order catalog showing patterns and fabric samples is \$2. Rue de France, 77 Thames St., Dept. OHJ, Newport, RI 02840. (401) 846-0317.



Rue de France's Old Calais pattern.

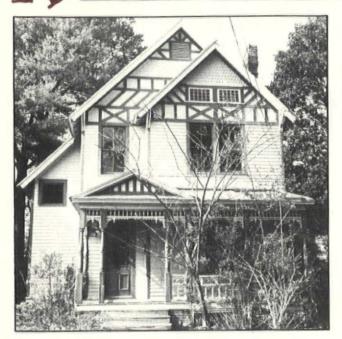
Quaker Lace cotton/polyester curtains are made on reknowned Nottingham lace machines. Many of their patterns are contemporary, but some like Bird of Paradise and Victoria would be an enchanting touch in a period room. A 64 in. x 84 in. panel is about \$35; a matching valance is about \$11. Special sizes can be ordered. For a free brochure and a distributor in your area, write Quaker Lace Co., 24 W. 40th St., Dept. OHJ, New York, NY 10018. (212) 221-0480.

A limited selection of Quaker Lace curtains can be mail-ordered through Hildegarde Studios, 597 Farmington Ave., Dept. OHJ, Hartford, CT 06105. (203) 232-4793.



Bird of Paradise from Quaker Lace.







THIS MONTH'S Remuddling is a lesson in the uses--and misuses--of an unusual, regional American building material. William Martin, of St. Simons Island, Georgia, submitted the photos and wrote a fascinating account of tabby:

"TRUE TABBY is a type of concrete prepared by mixing lime, water, sand, and shells in equal proportions. This building material is found only along the Atlantic coast of southern South Carolina, Georgia, and northern Florida, and along the Gulf coast of central

Florida. Tabby's popularity declined after the War Between The States, with the discovery of portland cement.

"BECAUSE it is indigenous to coastal Georgia, tabby has had a recent upsurge in popularity. However, the use of modern tabby is not historically accurate. Today's tabby, or 'tabby veneer' as I call it, consists of spreading concrete on a wall and throwing broken shells against the surface.

"THERE ARE several twin houses in the Old Town section of Brunswick, Georgia. These two were identical until the porch on the right was enclosed. The building material is modern tabby."

THE REMUDDLED HOUSE appears uncared-for and poor; it's unlikely that the addition was made with any sense of aesthetic awareness. What we find somewhat ironic is that this local building tradition (or rather, a characterless imitation of it) had a part in this example, which we'll file under Regional Remuddling.

-- Cole Gagne

The Old-House Journal

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Restoration and Maintenance Techniques For The Pre-1939 House

June 1983 / Vol. XI No. 5 / \$2.

Old-House Journal

Stencilling Secrets

TENCILLING is the most satisfying of the decorating crafts. It's simple enough so that a novice can learn enough technique in a single day to stencil a one-color border in a hall. Yet it's complex enough so that there's always something new to learn. Few of us will ever have sufficient skill to design and execute work on the level of the polychrome stencils (up to 52 colors) that Louis Sullivan designed for Chicago's Stock Exchange Trading Room. (If you like stencilling, be sure to see that room; it's been re-created at the Art Institute of Chicago.)

STENCILLING is an extremely flexible process, providing an endless source of delight for the creative individual. Best of all, the tools and materials needed for stencilling are quite cheap...so it's an ideal technique for a homeowner trying to create an authentic historical look on a tight budget.

continued on page 108



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	Coming in July

FIXING TOP-HUNG POCKET DOORS

HELP US WRITE OUR ANNIVERSARY ISSUE

The first issue of OHJ came out in October of 1973. So our October issue this year marks our tenth anniversary. We're reserving a special section in that issue for the stories we've always wanted to run. We hope you'll help us with the two ideas below.

CALLING ALL ETECTED

WE'VE TOUCHED ON many shared adventures in ten years of publishing, from the joy of a finished paint job to the toll restoration takes on a marriage.

A SUBJECT we haven't dealt with is, uh, previous inhabitants. Who are still there. Hauntings. Poltergeists. A funny feeling.

I WOULD NEVER think of running such an unusual story in OHJ (even knowing it's going to make good copy!) were it not for the fact that ghosts keep coming up, unsolicited. Otherwise pragmatic subscribers will be describing their work, and matter-of-factly go on to describe its effect on the spirit in the house. A sizable percentage of OHJ readers, it seems, believe Something is there with them. They apparently accept it as part of the charm and character of old-house living.

THE OHJ STAFF doesn't believe in ghosts, of course, but.... When I was in high school, I babysat in an 1880s house that had a tangible personality. At 11 pm each night, the house smelled faintly of coffee and the collie would squeeze into the same armchair with me. I shrugged it off, as did the owners, who nevertheless cheerfully knew they were haunted.

CLEM USED TO HEAR footsteps in a 1910 house he once rented -insistent enough that he or his wife would pad sleepily upstairs to check which child was out of bed. Nobody ever was. The mystery persisted.

JONI'S FATHER bought a rambling Victorian that had had only one owner. Portraits of the old family still hung against faded wallpaper...the place was untouched. She startled me one day when she reported, most nonchalantly, that she was go-

ing to keep her new stepbrother company -- because she thought he might be disquieted by the spirit if he spent the night alone in the house.

SO I'M WAITING for your ghost stories. They don't have to read like fiction to be absorbing. If you've ever suspected you're not entirely alone in your old house, this is your chance to share it. Maybe it's just the memories of the past, who knows? Memories can be powerful and real.

...oh, but tell me WHY you love us.

W ILL YOU INDULGE US on our birthday? As a present, we want to hear what OHJ has meant to you. Have we helped you through your darkest hour? Did something we've printed change your mind or lead you to a big decision? Maybe an article or tip in the past was especially useful to you....

HERE'S WHAT we need to turn your stories into good reading for the whole OHJ family:

- About 250 words on what OHJ has meant to you. Shorter items are okay too.
- Photos of a job you describe, of you and your house, or some 'before' and 'after' shots. Pictures with people in them are best.
- A happy ending makes a good story. But so does a disaster! And humor, tales of exasperation and conflict, surprises are always fun to read.
- . I need it all by July 25.

WE'LL RUN as many items as we can in the October issue. Got a good story to share?

Thanks!

Patricia wore



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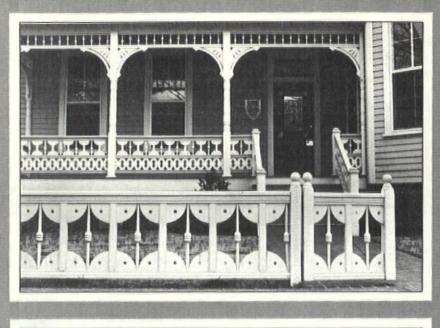
The Disappearing Wooden Fence

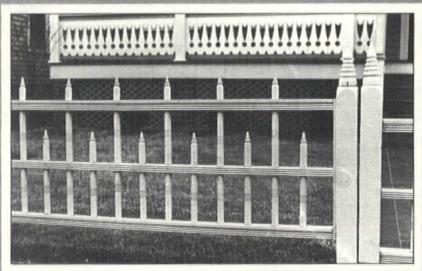
By Clem Labine

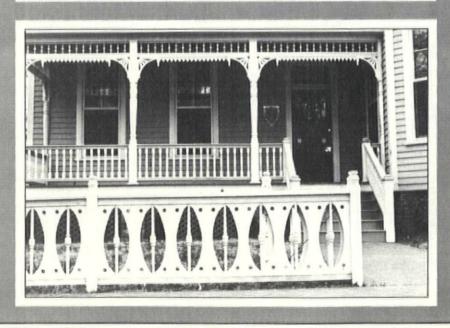


ooden Fences, like wooden porches, are an endangered species. Because they are exposed to relentless assaults from the weather, wooden fences require regular maintenance to prevent them from rotting away. But regular maintenance is a bothersome chore, one that most homeowners throughout history have avoided. So most of the fanciful wooden fences from the 19th and early 20th centuries have vanished.

WITH SO FEW wooden fences standing today, not many people realize what an impressive architectural ornament they can be. A wooden picket fence is more than just a property enclosure. Properly designed, a wooden fence is an architectural embellishment, just like a cornice, pilaster, or vergeboard. Considering the visual







impact a fence has on your property, the investment of time and materials is modest indeed.

WHEN CIRCLE S INDUSTRIES rehabilitated a block of Victorian cottages in Selma, Alabama, special attention was paid to the fences (as you can see from the photos in this article-they're all photos from one block in Selma). Each house has a unique fence that matches or coordinates with the wooden ornament on the porch and gables. And though they are all different, the heights are uniform so that they create a unified effect on the street.

THE PHOTOS in this article are meant to stimulate your imagination; they are merely a sampling of the infinite variety of shapes that are possible. If we succeed in enticing you to build your own wooden fence, the three-page Design File that follows shows you the best construction techniques. Or, if you prefer to buy the components pre-cut, see the box at the end of this article.

OOD FENCES may or may not make good neighbors. But they certainly do make good viewing.

SOURCES FOR WOODEN FENCES

All the fences pictured here were built by Nicol Lux, a restoration contractor in Selma. He has the tooling to make and sell any of these fences, as well as to produce custom designs. The price for his plain picket fence would be approximately \$10 per linear foot; the most complex turned fence, \$20 per foot (not including shipping). There's no literature available, but if you'd like to discuss a project with him, you can write: Nicol Lux, PO Box 765, Selma, AL 36702.

The following companies offer wooden fence parts by mail:

Colonial Charm, PO Box A-1111, Dept. OHJ, Findlay, OH 45840. (419) 424-0597. They offer a 20-page instruction guide to build your own picket fence; Colonial through Victorian styles, in 22

full-sized patterns, for \$5.

Mad River Wood Works, PO Box 163,
Dept. OHJ, Arcata, CA 95521. (707) 826-0629. They have several patterns of ornamental pickets, and also accept custom work. Catalog, \$1.

Renovation Products, 5302 Junius, Dept. OHJ, Dallas, TX 75214. (214) 827-5111.

They offer a line of stock fence pickets. Catalog, \$2.

Vintage Wood Works, Box 1157, Dept.
40, Fredericksburg, TX 78624. (512)
997-9513. They have a stock line of sawn

balusters. Catalog, \$2.

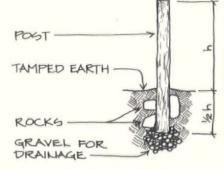
The Best Way To Build A Fence

some specifications for rot-resistant construction

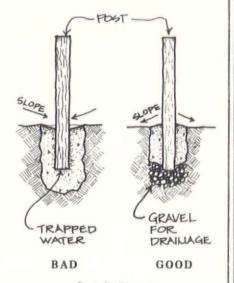
Illustrations by Jonathan Poore Consultant: Larry Jones

If you're going to take the trouble to build a wooden fence, you'll want it to last a long, long time. With good construction details, a wooden fence will last for decades. A poorly constructed fence will cost you nearly as much, yet may not last five years. It pays to use the best materials and the best building techniques.

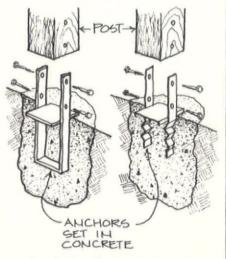
A fence should be detailed to use rot- and corrosion-resistant materials, shed water, and avoid exposed end grain and water traps. We put these principles into practice with the sample specifications in this Design File. These pages won't help you decide on a style for your fence — but they will tell you how to build one to last!



Posts In Tamped Earth



Posts In Concrete



Post Anchors For Termite Protection

Heavy- and medium-duty anchors are available. (The heavy-duty ones have a U-shaped bottom stirrup.) Use medium-duty for most intermediate posts, unless the fence is exceptionally tall. Always use heavy-duty anchors for gate posts.

About Materials

What Wood To Use: (1) Your best bet is a rot-resistant species such as cedar. Cedar normally comes rough-sawn, so ask to have it dressed if you don't have the equipment to do it yourself. (2) A second choice is redwood. Heart redwood is as rot-resistant as you can get, but today's redwood lumber often is partly sapwood—which is less durable. (3) Pressure-treated lumber is a good choice—if you can find it in the right dimensions. (4) If you use pine or fir, buy a good grade and dip-treat it with preservative.

Fasteners: A really fancy fence deserves brass screws, countersunk and plugged with wood plugs. But few people will take such trouble for a whole fence. So we recommend hot-dipped galvanized nails (not electroplated galvanized). Use aluminum finish nails where the head of a hot-dipped nail would be obtrusive, but aluminum won't grab as well.

Finishes: When you use construction techniques like those outlined here, the coating you put on the fence is merely cosmetic (a good thing, because nobody maintains a fence properly). Your choices: (1) Both whitewash and stain flow on easily, are easy to touch up, and don't flake and peel the way paint will. Neither offers much protection from rain and rot. (2) If you decide to paint, use a high quality exterior oil-based or oil-alkyd paint, and be prepared to scrape and repaint every few years. Gloss paint looks best and lasts longest. Note: latex won't stick to redwood. (3) Cedar and redwood can be left to weather to a natural Redwood will go beige-grey; cedar turns silver-grey first, then a darker charcoal grey. You can always apply a semi-transparent stain to a weathered fence before it gets too dark for your taste. An opaque stain is another choice for new fences, but it has some of the disadvantages of paint.

Posts

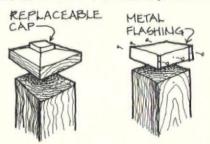
The maximum span for an average 2x4 cross rail is 8 feet. Therefore, you'll have to sink posts at least every 8 feet, as well as at gates and wherever the fence changes direction. A very general rule of thumb for fences in average soil conditions is to sink 1/3 of the total length of the post into the ground, leaving 2/3 above grade.

Packing a post hole with tamped earth is fine for posts along the straight run of the fence. (A post in earth should be less than six feet tall, and the soil not too sandy.) Gravel in the bottom of the post hole provides drainage so the post bottom won't sit in water. Rocks placed around the post will make it more sturdy.

In sandy soil, for gate posts, for very tall fences, and anywhere you need extra strength, set the posts in concrete. For normal soil conditions, the diameter of the concrete encasement should be three times the diameter or width of the post. The concrete provides a larger (and unshifting) bearing surface in the soil. The sandier or softer the soil, the larger the concrete encasement should be.

Post Anchors: In places like Texas where termites are an ever-present danger, metal post anchors are necessary. They're also a good idea in very damp soils. Post anchors are not sold at the corner hardware store. But you can buy them retail at a building supply dealer who caters to contractors. Manufacturers include Cleveland Steel Specialty (Cleveland) and Silver Metal Products (Livermore, CA). See Sweets Building Products Catalog File, Vol. II: 6.6. Buy galvanized anchors if possible. If not galvanized, anchors should be primed and painted. To attach, use only galvanized lag bolts. A disadvantage of post anchors is that the side flanges show, detracting from the clean lines of the post.

Tops Of Posts: How you handle the post tops determines how long they'll last. Here are the alternatives, in order of preference:

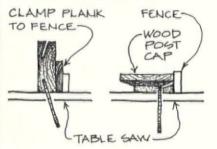


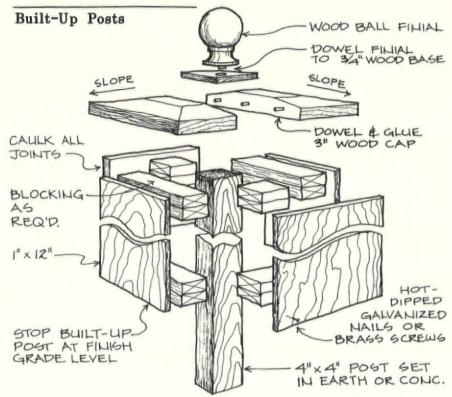
(1) A well constructed, replaceable cap is the best idea, but the most work to build. Note grain orientation: Should the wood cup from exposure, it will cup downward, so it will continue to shed water. (2) You can flash the top of the post — it works, but it's obtrusive.



(3) A bevel-cut top will shed water. However, the end grain is still exposed. Eventually the post top will check and split as it absorbs water. (4) A flat, exposed post top allows water to puddle; the end grain will readily absorb water.

The drawing below shows how to set up a table saw for cutting a post cap.





Many old fences get their stately appearance from massive posts. As commercial posts don't come larger than 6x6, anything bigger will have to be built up. In our example, the overall dimension of the post is 12 inches square. Its center is a solid 4x4 — this is the only part which is set into the ground. The skin, nailed to an armature of blocking as required for size, is cut from 1x12 planks.

Blocking is necessary at the top of the post and at the bottom where outer panels will be nailed or screwed. Additional blocking, for stability and to provide a nailing surface, should go wherever rails will butt or gate hinges will be screwed into the post.

The post can be constructed in the shop, or after the center post is in the ground. Nail blocking to the center post, then attach side panels to the blocking with aluminum or galvanized nails or with brass screws.

The built-up post needs a cap that will overhang the top. In our 12x12 example, the top is too big to be made from standard dimensional lumber: It has to be glued up. This example uses two 3x8s, cut to size. (A 2x8 wouldn't have sufficient thickness for a proper bevel.) Start with rough cedar planks if possible. Regular 3x8 structural lumber is not rot-resistant.

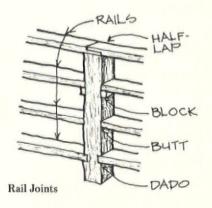
The assembly sequence for the cap: (1) Dowel and glue up planks, using waterproof glue. (2) Cut to size and bevel. (3) Before installation, dip the cap in wood preservative for at least 15 minutes.

Some well stocked lumberyards carry large wooden balls, as shown, for use as finials.

Rails

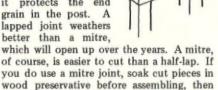
Several different ways to join rails to posts are shown at right. It's important to avoid weakening posts by cutting them, exposing end grain to weathering.

A continuous rail is strongest, but the design may dictate that rails abut the posts instead. A butt joint set on a block is quite strong, but the block is a visual intrusion. A plain butt joint looks clean, but is weak . . . only toe-nails through the rail into the post hold the joint together. A dado joint is strong, but it introduces a water trap. Rot could attack the post if caulking is not maintained at the connection. And of course, a dado is more work to cut.



Corner Of Top Rail: MITRE
The half-lap corner
joint is superior to a
butt or mitre, because
it protects the end
grain in the post. A
lapped joint weathers
better than a mitre,
which will open up over the year

caulk the joint.



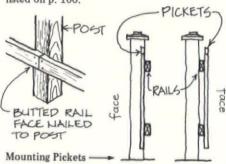
Pickets

Lumber: Green lumber will check, checking admits water, and the pickets may rot. Use well-seasoned lumber. If you're not sure of your lumber supplier, buy the lumber a year or two in advance and store it in a dry place.

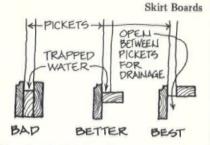
If you have a well-equipped shop, or need only a few pickets, shape them yourself. But if you have dozens and dozens to make, let a local lumberyard do the job. You can spend your time making post caps (there are fewer of those than pickets). Hint: If you're in a rush, you'll pay top dollar for the millworks to turn out your pickets. But if they can do the job over a period of weeks during slack periods, they may charge less.

Before assembly, dip pickets in wood preservative, or in a preservative stain. (Soaking pickets in a trough is the most effective method.) Cuprinol, etc., are recommended over penta-containing products. If the fence is to be painted, allow preservative to dry, then prime-paint before assembly.

Traditional wood fence designs often call for one-inch square pickets. Full-dimension oneinch stock is not easy to buy. You'll either have to cut down larger stock, or order square pickets from Mad River Woodworks, listed on p. 100.



Mounting Pickets: On this simplest of picket fences, two different ways of mounting the pickets change their orientation to the post. In the fence at left, the post is a prominent feature, interrupting the line of pickets. At right, the pickets march in an unbroken line, right past the face of each post. The rhythm of each fence is different; the aesthetic choice is yours.



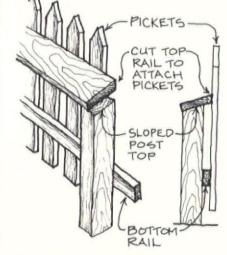
Skirt Board Details: The drawing above shows good and bad skirt board designs. The idea is to allow the joint to drain — not to trap water. Skirt boards should clear the ground by at least an inch.

Typical Designs

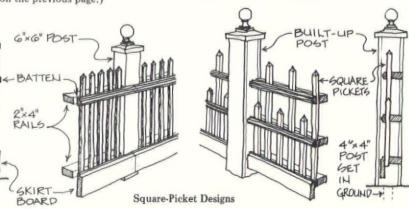
Sloped-Rail Picket Fence: This is a simple but pleasing design for a picket fence. Style is varied by shape of the pickets. Top rail is angled to shed water.

The angled top of each post can be cut before or after the post is set in the ground. Because of the top-rail angle, the front edge has to be bevel-cut to provide a flat face to nail pickets to. Rip this edge to the correct angle on a table saw. Top-rail sections should be joined at posts. Because the rail slopes, water will not puddle, so a simple butt joint is adequate. (Perfectionists can half-lap these joints.)

Square-Picket Designs: Traditionalists prefer these square-picket fences, reminiscent of 18th-century New England and popular ever since. These can be built around solid posts, or fence sections can abut larger, built-up posts. Note continuous rails and skirt on the solid-post fence, compared to the butting sections on the prototype with built-up posts. (Specifications for a built-up post are shown on the previous page.)

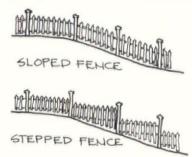


Typical Sloped Rail Detail



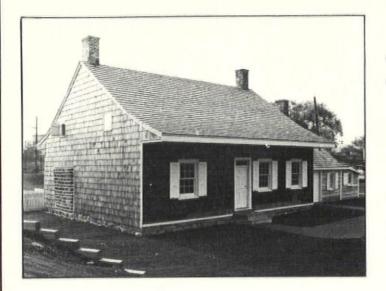
Slopes

Dealing With Sloped Ground: When you build a fence on rolling ground, there are two ways to deal with the slope. Either allow the fence to follow the slope, or keep the fence level by stepping it. On extremely steep slopes, the fence has to step. (A fence that tries to follow a radical slope will look like a twisted parallelogram.) Usually, the decision is an aesthetic one. Stepping is more prominent, calling attention to the roll of the land.



As the contours of the land change, you'll need to vary the sloping or stepping of the fence. Should the posts be evenly spaced, or form a rhythm such as three short sections punctuated by a long one? The only way to plan an attractive rhythm is to draw the contours on a piece of paper, then lay the fence out to scale. Whatever pleases the eye is right.

Restoration Design File #15



Foundation Fundamentals

How Foundations Work, Why They Fail, and Principles of Repair.

By John Mark Garrison

The Wyckoff House, an historic restoration in Brooklyn. Its foundation was completely rebuilt using the original stones. See the case history on p. 106.

OUNDATIONS, it seems, are one of the least understood aspects of old-house construction. A surprising number of OHJ readers have had to tackle some sort of foundation repairs, though, whether by themselves or by hiring a contractor. What we will offer here is an overview of foundation basics: how they work, why they fail, and some principles to follow when dealing with foundations under old buildings. A case history at the end of the article documents an actual job of total foundation rebuilding.

THE INESCAPABLE first step in foundation repairs is finding a way to shore up the building, temporarily transferring the load off the foundation. The basic techniques for shoring and house jacking were explained in the January/February issue earlier this year.

YOU MAY OR MAY NOT feel up to the somewhat awesome task of working on the foundation of your
house. Many foundation projects on moderatesized wood-frame buildings have been
successfully done by homeowners. But
beware! This article concerns woodframe buildings only; repairing
the foundation of a masonry
building is a highly specialized operation. You'll need a
specialized contractor for such
work.

ISTORICALLY, FOUNDATIONS have been made from wood, brick, and stone. No matter what the building material is, the basic principle is about the same; namely that the foundation distribute the weight of the building over an area of soil which is of sufficient strength to resist the load.

Foundations, in theory at least, are proportioned to the load or weight of the building they are supposed to bear.

More About Foundations

S TONE APPEARS to be the most common foundation building material prior to the advent of poured concrete in the 1920s.

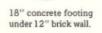
Brick, cast stone, and later concrete block were all common replacements for stone in areas where they could be produced and transported more cheaply than stone.

MOST FOUNDATIONS rest on footings or pads whose size and thickness are dictated by soil conditions and building weight. Soils high in clay content can "swim," or move under pressure, and thus require the largest footing area. Soils containing sand, gravel, or rock require less footing area. Consult a qualified architect, engineer, or building contractor to assist you with designing a new footing, should one be required for your project.

MOST HOUSES HAVE SETTLED somewhat since they were built; uniform

settlement up to as much as an inch is not uncommon. Woodframe houses can be expected to settle less than masonry ones due to the differences in their weights. Unfortunately, unexpected settlements can occur when foundations or sections of them are no longer able to sup-

port their building loads.
And if the ability of the
soil to resist the transmitted load changes, differential settlements can result.
The following are some causes.



Differential Settlement Causes of Failure

- POOR DESIGN AND EXECUTION are the most basic causes of differential settlement, where one section of a building will move relative to another. This is most often caused by improper estimating of the differing building loads at the time of construction. A common example would be the settlement of an interior post or pier relative to the exterior foundation wall. Many times appendages of an older house such as bay windows, porches, stoops and later additions rest on their own foundations, which can have movement and settling problems independent of the main structure.
- OTHERWISE WELL DESIGNED FOUNDATIONS are sometimes weakened by settlement resulting from the use of loose fill. In all good construction the footings are placed on undisturbed soil, excavated to an even depth. Errors in digging the original foundation trenching result in back filling to obtain a level surface. It is very difficult to compact the fill sufficiently to match the adjacent undisturbed soil which has received the application of a steady load over time. In such areas uneven settlement can be expected to occur.
- A RAISING OR LOWERING OF THE GROUND WATER table after the original construction of the house can alter the load-carrying capacity of the soil. The result is usually differential settlement. Poor drainage around a building, accentuated by runoff from roofs and gutters, can seriously weaken a foundation. Badly designed or installed underground drain lines and trenches adjacent to the bottom of foundations can wash away supporting soil, resulting in unwanted settlement.
- FROST HEAVE IS A MORE UNUSUAL CAUSE of foundation failure not due to soil compression but to soil expansion. Foundations improperly built above the frost line of the soil can actually be forced upward by the expansion of moisture when it freezes. Frost lines vary from one area to another and seldom seem to affect older buildings if properly constructed with their original soil levels and water tables maintained.
- THE DETERIORATION OF THE FOUNDATION building material itself is often a cause of foundation failures:
- Stone, brick, concrete, and wood are all susceptible to decay, especially when exposed to moisture.
- The indiscriminate or accidental removal of foundation materials -- for instance, to accommodate duct runs around the perimeter of the foundation at the sill -- or loose masonry falling out of the wall can result in a chain reaction resulting in uneven foundation stresses.
- Foundation stone laid with its grain running other than horizontally can fail under loading.
- Deteriorated mortar joints can significantly reduce a foundation's strength, allowing uneven settlement and masonry units to dislodge.

- Premature cracking and spalling of foundation brick and stone can result from repointing with mortar which is harder than the original mortar or the masonry units it binds.
- Trees and shrubbery roots penetrating or bearing on the foundation can lift and separate it, resulting in serious structural damage.
- ♠ Excessive loading of soil adjacent to foundations, such as parking a car next to the house or a heavily traveled nearby street, can gradually force a foundation wall out of plumb and into the basement.

Three Principles

NCE FOUNDATION damage has been found, it's important to check for continuing movement. Not all settlement, even that which leads to crookedness or misalignment, is necessarily dangerous to the structure of the house. The settlement or movement may have reached its fullest extent and be tolerable (if substantial damage has not already occurred). Techniques for monitoring cracks and movement are covered in the May, July, Aug., and Dec. 1981 issues of OHJ. Since we can't tell you how to restore your particular foundation, we can offer a few principles specific to old houses.

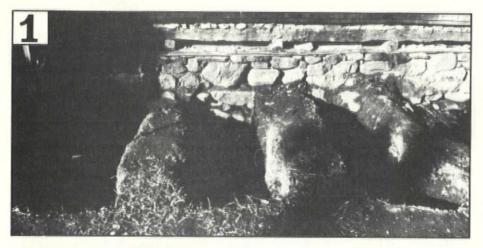
NOT ALL foundations in need of repair or restoration necessarily require the extreme measure or expense of total rebuilding. Often sectional or spot repairs may prove to be the most cost effective and sensitive approach.

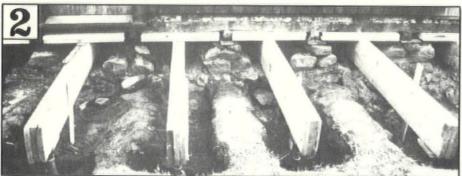
WHEN THERE is no other option but to totally replace a foundation, always try to salvage and reuse the original materials. If they are unsalvageable, stick to close duplicates. Consider cladding non-original foundation materials, such as poured concrete, with the original material: brick, for instance. This is most important where the foundation is exposed to view.

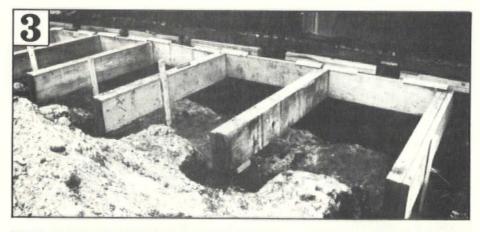
NEW MORTAR for repointing brick and stone foundations should be carefully mixed to duplicate as closely as possible the original mortar color, texture, joint tooling, and hardness. The old sand/lime mortars did not set up as hard and inflexible as today's portland cement mortars, and had the added ability of being able to self-heal small cracks in themselves. Pre-mixed portland cement mortars available today are most always much too hard for use on older masonry, and actually damage the masonry units they're applied to. Some excellent "soft" mortar mixes are discussed in the June 1981 OHJ. The Wyckoff House case study to follow had its foundation walls repointed with a "soft" mortar mix composed of 1 part white portland cement, 2 parts hydrated lime, and 7 parts sand, with yellow and brown pigments added in order to match the original color.

TO BETTER HELP YOU understand the process and steps involved in foundation repair, we have chosen a case study representing the final, last resort: rebuilding the foundation from the ground up.

Foundation Restoration At The Wyckoff House









THE PROJECT:

The Wyckoff House in Brooklyn, New York, owned by the New York City Dept. of Parks and Recreation, serves as an excellent example of a foundation replacement where the existing stone foundation no longer properly supported the structure.

Over the years the house had begun to settle unevenly for the following reasons: (1) Most of the stone foundation was laid directly on top of the ground. In some places it went a foot or so below grade, which was still above the frost line. (2) All of the mortar had long since disappeared from between foundation stones. (3) The adjacent site drainage was poor, and a high water table plagued the site. The settlement which resulted eventually caused a substantial curve to develop in the oak sills resting on the foundation. Otherwise, the house was in good condition structurally.

The goal of the foundation repair was to raise the house back to its original position, remove the existing foundation, install a solid footing beneath the structure, build a new foundation to resemble the original, and water-proof the footing and foundation to reduce ground water problems. All of this without altering the original appearance of the house or damaging its historic fabric!

THE PROCESS:

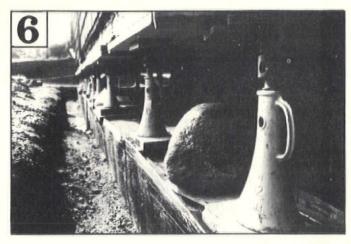
The first step was to remove the bottom course of shingles to expose the structurally sound but deflected sill. (See photo no. 1.) Trenches were dug perpendicular to the foundation to allow for the installation of needle beams. The needle beams were "leap frogged" under the building. That is, the beams were alternated with parts of the original foundation, temporarily leaving piers between needles, until the building weight could be fully carried by the beams.

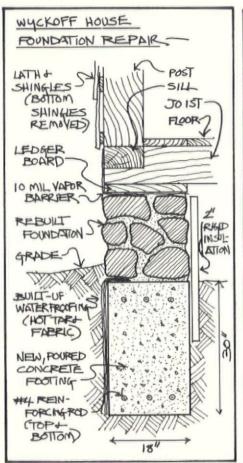
Once the beams were in place with plywood pads used to help spread the pressure on the sills, standard screw jacks were placed near the end of the beam. (photo no. 2) Additional blocking was hung between the 2×12 beams to keep the beams upright but not rigidly attached, allowing them free movement. Small vertical stakes adjacent to the needles were used to mark the height of each beam to aid in detecting any settling of the jacks under pressure. (photo no. 3)

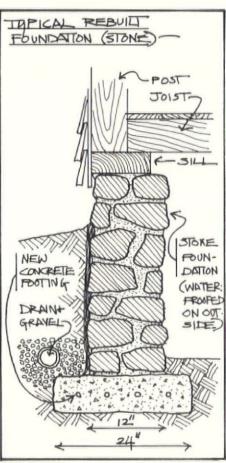
With the beams in place and supporting the structure, the deteriorated foundation was removed, allowing the new footing to be formed up and poured. (photo no. 4) When the concrete had set, the beams were removed one by one and replaced with screw jacks. This time the jacks rested directly on the footing with the blocking retained between the jack and the sill to prevent point-loading of the sill. (photo no. 5)

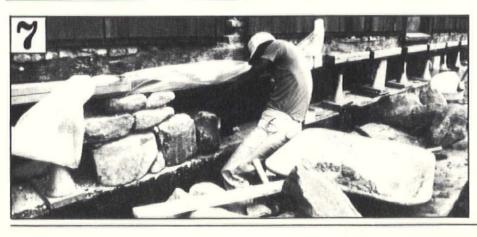
With the new footing exposed, waterproofing was applied to the exterior, underground surface, up to within 6 inches of the grade line. The house had settled considerably on its uneven foundation. So in order to level it without causing damage, it was determined that the flexibility of the wood frame would allow one turn per day. The jacks were individually adjusted









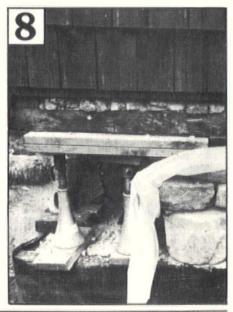


over a two-month period to gradually correct the deflections in the wall. Great care was taken to preserve the fragile original plaster within the house. (photo no. 6)

Photos had been taken before the foundation was dismantled, to document the original placement of stones. Now, in rebuilding the visible stone foundation on top of the new poured footing, salvaged stone was relaid to duplicate the photos as closely as possible. The foundation was laid section by section, removing one jack at a time until completed.

A heavy, 10-mil plastic sheeting was installed as a vapor barrier between the foundation and the window sill. (photo no. 7) At the corners, double jacks were laid for support until the last stones could be laid. (See photo no. 8; also refer to the drawings at left, which show the water-proofing and flashing details for the Wyckoff House, as well as a more typical example.)

Rigid insulation was placed against the "warm" or inside face of the foundation, from the top of the foundation at the sill down to below grade. Excavation around the foundation and footings was back-filled and mechanically compacted to produce a suitable grade. Finally, the lower shingles were replaced, covering the sill and completing the project.



TENCILLED DECORATION has been used in America since colonial times. It reached its zenith in the late Victorian era, both in number of craftsmen and in sophistication of design. Even when stencilling's popularity began to wane after the turn of the century, it still found plenty of application in Craftsman (Arts & Crafts), Art Nouveau, and other turn-of-the century interiors. So whether your house is early American, Victorian, or post-Victorian, chances are there's an attractive stencilling scheme that would also be historically appropriate.

STENCILLING isn't difficult, but it always helps to have someone with a bit of experience give you some pointers. In this short article, we'll share with you some of the tricks the OHJ staff has learned on our own projects. We hope to stimulate your interest sufficiently so you'll start experimenting on your own.

them before use. It's best to do this after you outline the design, but before cutting the pattern (oiled card stock cuts more readily). To seal, liberally coat the card stock with a 1:1 mixture of turpentine and boiled linseed oil. Apply as much as the cardboard will hold. After 10 minutes, wipe off any excess and hang the stock up to dry on a thumbtack. (SAFETY NOTE: Spontaneous combustion is a danger with rags or paper towels soaked in linseed oil. Burn them, or put them in a metal container that's stored outside.)

IF YOU'RE IN A HURRY, seal your stencils with shellac. It dries faster than linseed oil, but the stencils won't last as long.

Copying The Pattern

F YOU HAVE A PATTERN that's the right size, simply slip some carbon paper under it and trace it onto your stencil stock. If your chosen pattern is not the right size, enlarge or reduce it at a shop that makes photostats. Then trace the photostat. You can also resort

Four Stencilled Borders, Four Different Eras









Early American

Victorian

Art Nouveau

Arts & Crafts

Sources Of Patterns

ATTERNS SELECTED should be appropriate to the age and style of your house. (Golden Rule #2 applies here: "To Thine Own Style Be True.") For example, an early American Moses Eaton stencil would be out of place in a formal Victorian parlor.

SOURCES OF stencil patterns are everywhere. In stencilling my own house, for example, sources of inspiration included reprints of Henry Hudson Holly's "Modern Dwellings" and Christopher Dresser's "Modern Ornamentation," as well as museum houses and the photographs in "Tasteful Interlude." I even adapted a pattern from incising in my woodwork. Once you're attuned incising in my woodwork. Once you're attuned to pattern-seeking, you'll find them in historic wallpapers, fabrics, carpets, and even (See also the inexpensive stenetched glass. cil books from Dover, listed on page 113.)

Stencil Materials

ANY STENCILLERS prefer Mylar sheets for stencils because it's tough and transparent--simplifying the task of registering (lining up) successive stencils on multi-color jobs. I prefer bristol board card stock (slightly heavier than 3x5 cards) because it's cheap and readily available. For small stencils, I've even used manila file folders. Or you can buy commercial stencil board from a few well-stocked paint stores, such as Wolf Paints (page 112).

STENCILS made from card stock would absorb paint and cleaning solvents if you didn't seal to the graphic artist's trick of laying a grid over the pattern, then proportioning the design up or down, square by square.

IF YOU'RE CREATING your own symmetrical design, you'll have the problem of making the right half exactly like the left. So draw only half the pattern on stencil paper, then cut it out. Now trace the cut-out half-pattern onto a fresh piece of stencil paper, then flop the pattern and trace its mirror image.

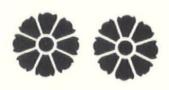
STENCIL CUTTING is tedious, finger-numbing work. There are special stencil-cutting knives, although I've found X-Acto knives satisfactory. You have to turn the stencil continually while cutting to avoid contorting your body. Ideally, you'll have a piece of plate glass under the stencil while cutting. But I've used a thick pad of newspapers with adequate results. (You create a lot of newspaper confetti, however!)

IF THE KNIFE SLIPS, cutting through a narrow point in the pattern, apply masking tape to the front and back, then re-cut.

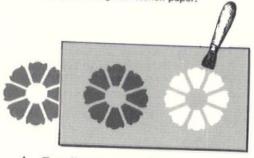
What Paint To Use

OME STENCILLERS prefer Japan colors for their thick consistency and rapid drying. A fast-drying paint allows you to immediately lay the stencil for a second color over a freshly applied first color. In decorating walls, however, house paint (oil-alkyd semi-gloss or flat) works fine. The paint layer in stencilling is so thin that, by the time you get around to laying down the second

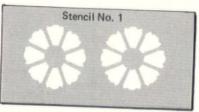
How To Make A Two-Color Border Using Heavy Paper Stencils



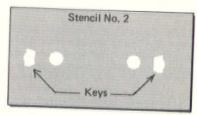
Starting point: A Victorian stylized sunflower border pattern that was found in an old engraving. One complete sunflower is drawn on heavy paper, and is used as a pattern for tracing the design on stencil paper.



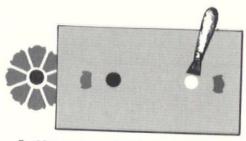
4. Two flowers are created with the first printing. Stencil is then carefully lifted and moved to the right. Petals on flower at left of the stencil are lined up with petals previously printed. Only one flower can be printed with each setting of the stencil from here on.



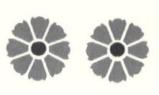
 A separate stencil is needed for each color. In this example, the petals will be in one color, and the centers in another. At least two repeats of the pattern are needed to register the new work with paint already laid down.



 A second stencil is created for the centers of the sunflowers. The ends of two petals are also cut out on this stencil to act as keys to register the second color. Pattern in second stencil must match up with the first.



5. After all the petals in the border have been printed, the stencil for the second color is started. Cutouts for tips of the petals are used only for alignment; the second color is applied only through the two holes in the center of the stencil.



6. Two of the completed flowers in the border. If it's exposed to hard use, you can coat stencilling with a flat varnish to make it more washable.

color, the first color is pretty dry. Stick to brands of house paint that are fairly thick, or allow a small amount of paint to sit uncovered for a few hours. It'll get thicker as the solvent evaporates.

SOME PEOPLE prefer the richness of artists' oil colors that come in tubes. They take a long time to dry, though, and normally aren't satisfactory for multi-color jobs. That is, unless you lay all the colors with one positioning of the stencil--see box at the end of this article.

Brushes

H, THE MYSTIQUE of those strange little stencil brushes! It is true that a lousy brush will make your life miserable. But there's more than one way to get the job done. Traditional stencil brushes are short and stubby. Paint is applied with a thumping motion, perpendicular to the stencil. (You'll find sources for stencil brushes listed on page 112.)

MANY TIMES I've stencilled with a 2-inch varnishing brush, which is easier to obtain. When you use a varnish brush, you use a swirling, swishing motion, rather than thumping. The swishing technique is faster than thumping, but it puts more strain on the stencil. If you have lots of thin, delicate parts in the pattern, use the thumping method.

SOME PEOPLE get fine results with cut-up sponges. And for really small jobs, a bit of

velvet wrapped around your index finger works well.

Applying Paint

HE BIGGEST SURPRISE for novice stencillers is how little paint you need on the brush. Too much paint, and the pattern will smear and run. Dip only the ends of the bristles in paint. Work the ends of the bristles on a pad of newspaper until the brush seems right. Next make a practice print of the stencil on a sample board. Then and only then should you attempt to make a print on your wall. Your brush should never go directly from the paint container to the stencil. Always work it on a pad of newspaper first.

IF YOUR PATTERN smears, it's not the end of the world. Wipe the mistake off the wall with a rag dampened with the appropriate solvent. (Mineral spirits for oil paint; water for acrylic and latex paints.) Allow the solvent to dry completely before stencilling again.

KEEP YOUR STENCIL CLEAN, especially of any paint that leaks onto the back. If you're wearing old trousers, clean the back of the stencil by rubbing it back and forth over your knee, like a shoeshine rag.

IF THE STENCIL is being moved left to right, apply paint from right to left. This allows longer drying time in the area where the stencil overlaps during the next printing.

THEORETICALLY, you can use one stencil to apply several colors in a design. But if there's

THE BEST BOOK ON STENCILLING

THE ART OF DECORATIVE STENCILLING by Adele Bishop and Cile Lord is the best book we've found to teach the basics of stencilling. It has excellent descriptions of measuring and layout procedures, as well as techniques for creating multi-color designs. The authors' techniques are based on Mylar stencils and Japan colors, rather than the more readily available oil-based house paints. However, the principles are easily adapted to other materials. 198 pages, softbound. If not available at your bookstore, you can order it for \$16.95 from: The Old-House Bookshop, 69A Seventh Ave., Brooklyn, N.Y. 11217. Or use the Order Form at the back of this issue.

IF YOU HAVE a late Victorian house, you can also get useful decorating ideas from the reprint edition of *Modern Dwellings*, by Henry Hudson Holly (1878). It concentrates on the Queen Anne and Aesthetic styles for decorating parlors, libraries, dining rooms, and bedrooms. The volume also contains Holly's *Country Seats* (1863). 390 pages, softbound. Available for \$13.95 from the Old-House Bookshop at address above.

fine detail in the pattern, then you must use small brushes to avoid slopping paint into the wrong sections of the pattern. But if you use a small brush, the work goes slowly. You could block out sections of the stencil with masking tape, but that, too, takes time. That's why, for decorating large surfaces, there's usually a separate stencil for each color: you can use a large brush and develop speed.

Additional Hints

- You'll feel terrible if a complex stencilling job is gradually ruined by inevitable hairline cracking of the plaster. Why not canvas the walls (or ceiling) first?
- Always start with a freshly prepared and painted surface. And save some of the back-

ground paint. If the job is botched, you can always paint out mistakes and try again.

- Make a sample board out of a 3-ft, x 3-ft. piece of 1/4-in. Masonite. Paint it the same color as the surface you'll be decorating. Use it to practice on, and to work out alternate color schemes.
- You can hold a stencil in place on a wall with masking tape. After you're proficient, you'll probably get by without the tape.
- When moving the stencil, lift it straight back from the surface. This avoids smudging.
- A muffin tin makes a convenient container when you're working with several paint colors simultaneously.
- Always save some stencil paint in a small jar for later touch-ups.
- Clean stencils thoroughly when finished. Pat gently with a cloth dampened with appropriate solvent (mineral spirits for oil paints, water for acrylics and latex). Be careful; it is easy to damage stencils during cleaning.
- A stencil that's on its last legs can be used as a pattern to trace a new stencil. But ...the image area in the new stencil will be slightly smaller than the original because of the width of the pencil line. This process, repeated over several generations of stencils, can result in considerable shrinkage of the pattern.
- Store stencils flat.

ACKNOWLEDGMENTS: Thanks to Joni Monnich who served as the OHJ "test kitchen" for some of the stencilling procedures in this article. And special thanks to Howard Zucker and Helmut Buecherl who introduced me to the art of decorative stencilling.

HOW TO KEEP THE STENCIL IN PLACE

EN LINE Y EN LINE Y

by Renee Kahn

FOR THE NOVICE STENCILLER, a big problem is paint running behind the stencil, smearing the design. It takes a lot of skill and practice to regulate the amount of paint you use, and to learn exactly how to handle the brush. But my stencilling team and I discovered a neat, effective way of preventing drips during the re-creation of 19th-century stencilling at St. Luke's Chapel in Stamford, Connecticut.

HERE'S THE TRICK: Lightly coat the back side of your stencil with 'Spray Mount,' a common aerosol adhesive available at art supply stores. Allow the adhesive to dry until it is tacky. Now you can apply the stencil to the surface you're decorating, and it'll faithfully follow any bumps and curves. Because the stencil is sticking tightly, paint can't ooze down behind it. Just be careful not to spray too heavily, because narrow parts of the stencil design which are too tightly stuck to the surface may tear when you pull the stencil off.

FOR OUR PROJECT, we used standard oil-alkyd semi-gloss wall paint, as well as artist's oil colors straight from the tube. Artist's colors take a long time to dry, so usually we don't use them for patterns that require multiple stencils for additional colors.

BUT THE SECOND BENEFIT of the Spray-Mount method is that we could apply all the colors through a single stencil. With

such firm adherence, the stencil didn't shift around. We used small pieces of sponge or foam rubber padding instead of stencilling brushes, finding them more suitable for working paint into small parts of the pattern. After each repeat, we'd peel the stencil off the wall carefully and move it down to the next repeat. The adhesive stays tacky for many repeats.

THIS SIMPLIFIED PROCEDURE allowed Lynn Taylor, one of our summer interns, to complete an elaborate, three-colored wainscot in less than five working days. And Lynn had never done any stencilling before.

WE HAD ANOTHER opportunity to show that anyone can be a stenciller with this method. In St. Luke's Chapel, there's an arch that towers 25 feet in the air — higher than any of us really wanted to work. So we hired a roofer who brought in his rigging. We gave him a crash course in the art of stencilling, and up he went!

Restoration of the stencils in St. Luke's Chapel was coordinated by Stamford's Historic Neighborhood Preservation Program, a design service funded by the Stamford Community Development Program and the Connecticut State Historic Preservation Office.

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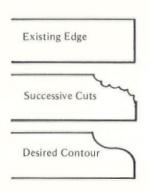
Restorer's Notebook



Shaping Marble

E FOUND a beautiful old marble top from a sink in a salvage yard and wanted to combine it with a commode for use in our bathroom. The marble had been originally designed for use in a corner, so the fancy edge was on only two sides. Our bathroom arrangement wouldn't allow us to use the marble in a corner, and it was impractical to pay a professional to reshape the straight edge.

THE MARBLEWORKER suggested I grind the marble myself with a small, mushroom-shaped grinding wheel attached to a drill or router. I clamped a board on the marble top and used it as a guide, taking small, successive approximations until I got roughly the desired contour. Then I sanded the rough edges, using progressively finer grades of sandpaper. Amazingly, marble is not much harder than hardwood. A lot of elbow grease combined with 400 grade wet or dry paper with water on the last step leaves the marble super smooth and polished.





A CHAMFERED edge can be easily done with a hand-held wood rasp and then finished off with sandpaper. Safety precautions: Make sure the maximum RPM rating on the grinding wheel isn't exceeded by your router or drill. Also, safety glasses are a must, and earplugs come in handy.

Dan Miller Elgin, Ill.

Cleaning Radiators

NCE I USED TO DREAD cleaning cast-iron radiators--either for spring cleaning or to repaint. It still isn't as much fun as curling up with a good book, but it's not the dreaded task it used to be. My procedure is to use a good quality spray bottle, with the nozzle adjusted to spray a straight, pointed line. Fill the bottle with Amway's "Industroclean" (or any heavy-duty cleaner), diluted 1 to 1. Put plenty of towels under the radiator and tape newspaper behind it. Spray the radiator, beginning at the top. Use the strength of the spray to dislodge all the dirt and dust between the coils. Work from right to left,

then from left to right. Do this on all levels, from the top to the bottom of the radiator. (It's nearly impossible to get the back coils as clean as the front ones.)

AFTER YOU FINISH CLEANING, refill the bottle with hot water and redo the procedure, starting at the beginning. This rinsing will also dislodge any stubborn dirt that survived the first spray. Afterwards, leave the radiator alone to dry--several hours if you're going to repaint it. Remove the towels as soon as you can so the moisture doesn't damage the floor.

Sue Schubert Spencerport, N.Y.

A Steel Wool Holder

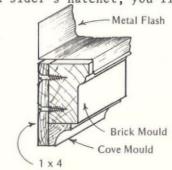
HEN I STRIP WOOD, I do the final cleanup by hand with some steel wool. Unfortunately, this procedure usually gets
slivers of wood or steel wool in my fingers,
and also tends to irritate and dry out my skin.
Now I avoid all that by using a medium-size
bristle brush--the ones for wood stripping are
perfect. I just set the steel wool on the
brush. It never slips from its holder, and
enables me to really pour on the elbow grease.

Paul J. Hayden South Bend, Ind.

Making New Mouldings

F YOU'RE WORKING on a house that was victimized by the aluminum sider's hatchet, you'll

find window heads and beaded border mouldings chopped off. Milling new mouldings is often unaffordable. But it's possible to save time and money by building up stock mouldings to the desired profile. In my situation, I used brick mould and a 3/4 or 1 inch cove mould, fastened to a 1 x 4. You can attach the



pieces with screws and exterior panel adhesive.

Patrick Kee Ida Grove, Iowa

Tips To Share? Do you have any hints or short cuts that might help other old-house owners? We'll pay \$15 for any short how-to items that are used in this "Restorer's Notebook" column. Write to Notebook Editor, The Old-House Journal, 69A Seventh Avenue, Brooklyn, NY 11217.



&Stencils & Stencils & Stencils & Stencils & Stencils &

This month we've chosen products for the stenciler's needs. Whether you're a beginner or a professional, these companies will help you rediscover this traditional method of decorating.

A well known mail-order source for stencils is Adele Bishop. Besides offering a large selection of Early American designs, and a few contemporary ones, they have three simple Victorian patterns copied from those in the second-floor rooms of the Mark Twain House. Their stencils are printed on Mylar, Prices range from \$3,50 for a simple, single stencil to \$39.95 for a complete collection of the Shelburne Museum designs. Only the three Victorian stencils are pre-cut. Their color catalog, \$2.50, also features stencil brushes, Japan and fabric paints, and clear Mylar to trace your own patterns. Adele Bishop, Inc., Box 557, Dept. OHJ, Manchester, VT 05254. (802) 362-3537.



Bishop's Shelburne Museum stencils

If you are confused by the enormous selection of patterns and how to use them in a room, Pamela Friend of Hand-Stenciled Interiors can help. You answer a detailed questionnaire about your house and the room you wish to decorate. Then Ms. Friend chooses an appropriate design from her extensive selection of about 6000 patterns ranging from Early American to contemporary...many of which are antique, unpublished stencils. Prices range from \$15 to about \$50 for pre-cut stencils. All patterns are sent with complete layout instructions. For further information about this unique service, send \$1 to Hand-Stenciled Interiors, 590 King St., Dept. OHJ, Hanover, MA 02339. (617) 878-7596.

Inexpensive, pre-cut plastic stencils can be purchased from Whole Kit & Ka-

lection of Early American Victorian patterns is limited, but it does include some unusual designs: (1) the Egyptian series, (2) a simple peacock, and (3) Mediterranean tiles and borders (perfect for a kitchen floor). Prices range from \$2.25 to \$3.98; a catalog, \$1, features their complete selection of forty stencils. Brushes and fabric stencil paint are also sold. Whole Kit and Kaboodle Co., Inc.,

boodle. Their se-



8 W. 19th St., Dept. OHJ, New York, NY 10011. (212) 675-8892.



Forty traditional and Early American patterns, not all of which are the standard Moses Eaton forms, are available from Timeless Patterns. Though printed on Mylar, not all of the linework is perfectly sharp, but you can correct this when cutting the stencil. The company also recommends tracing their patterns on walls or floors and filling in the details free-hand. A single pattern, including a Victorian swag border, is \$14.95, any two patterns are \$21.95, three patterns are \$27.95, and four or more are \$8.95 each. Their catalog, \$3, indicates which of the designs are adaptations from historic houses in the Northeast. It also suggests traditional color schemes. Timeless Patterns, 465 Colrain Rd., Dept. OHJ, Greenfield, MA 01301. (413) 774-5742.

The following companies are mailorder sources for stencilling supplies:

Mohawk Finishing Products, Inc., Rt. 30 N., Dept. OHJ, Amsterdam, NY 12010. (518) 843-1380. Stencil brushes: 7/8 in., \$4.95; 11/4 in., \$6.30. Japan colors range from \$4.50 for black to \$7.50 for yellows, in half-pint cans. The minimum order is \$25. These and other products can be seen in the catalog, \$4 (\$2 is refundable upon first purchase).

Janovic Plaza, Inc., 1150 Third Avenue, Dept. OHJ, New York, NY 10021. (212) 772-1400. Stencil brushes range in size and price from 1 in., \$5.85, to 11/2 in., \$9.99. Japan colors are \$3 to \$6.10 for a half pint. Also, .0075 acetate (similar to Mylar) in 25 in, x 40 in, sheets are \$4.60 each.

Chromatic Paint Corp., PO Box 105, Dept. OHJ, Garnerville, NY 10923. (914) 947-3210. A manufacturer of high-quality Japan paints in 31 colors. The suggested retail is \$2.80 to \$5.90 for a half pint, and \$8 - \$17.35 for the quart size. They offer a free color card and will be happy to put you in touch with a dealer in your area.

Wolf Paints and Wallpapers, 771 Ninth Ave., Dept. OHJ, New York, NY 10019. (212) 245-7777. A complete source for those stencil brushes and paper you can't find at the local hardware store. They even have traditional oiled stencil board, sold in 24 in. x 36 in. sheets for \$2.39 each, Mylar is also available, Small white bristle stencil brushes are 3/8 to 5/8 inch in diameter, and range from \$1.19 to \$1.56. Larger, black bristle stencil brushes in sizes no. 2 to no. 12 (ranging from 5/8 in. to 13/4 in.) are \$4.15 to \$7.98. Japan paints, in half-pint jars, are \$2.30 for black and up to \$4.46 for Cadmium yellow. Their catalog, \$2, shows a vast selection of products, but you have to phone for current prices.



A Timeless Patterns stencil based on an Early American design in the Josiah Sage House, western Mass.

#Stencils##

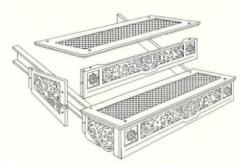
If you'd like to try your hand at creating your own stencils — or making a stencil from an original pattern — contact the following companies for pattern ideas and necessary supplies.

Dover Publications is one of the best sources we've found for pattern books. They offer inexpensive paperback books (usually 40-100 pages long) with an abundance of authentic period patterns ... Colonial, Victorian, and Art Nouveau. I'd recommend writing for the current copy of their free book catalog. If you can't wait, here are some titles of interest: Victorian Cut & Use Stencils, by Carol Belanger Grafton (\$3.95); Art Nouveau Cut & Use Stencils, by JoAnne C. Day (\$3.75); A Treasury of Stencil Designs for Artists & Craftsmen, by Isaacson & Rennie (\$2.75); Victorian Stencils for Design & Decoration, by Edmund V. Gillon (\$4.50); and a brandnew title, Authentic Victorian Stencil Designs, by Carol Belanger Grafton (\$3.50). Postage is \$.75 for one book, \$1.25 for two or more. Books and a complete catalog can be ordered from Dover Publications, 180 Varick St., Mail Order Dept.-OHJ, New York, NY 10014.

Peg Hall sells about fifty patterns for stencilling furniture and decorative accessories, such as trunks and tinware. Sold with instructions and color suggestions, these authentic Victorian or Early American designs range from \$.10 to \$2. A descriptive brochure is \$.25. Peg Hall Studios, 111 Clapp Rd., Dept. OHJ, Scituate, MA 02066. (617) 545-3605.

Brand New Stairs

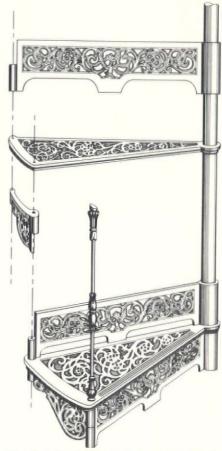
The Kensington is a cast-iron straight staircase just introduced by Steptoe. It can be used as a replacement for a missing or deteriorating wood or stone step, especially on a late Victorian or turn-ofthe-century house. Although it isn't an exact reproduction, it is a high-quality casting featuring a solid embossed tread and open 'fretwork' risers. The stair is an adaptation of stairs common in Washington, D.C., and other areas where castiron architecture is prevalent. Sold in modular units, each consists of four castings bolted together to form a 36 in. wide step with a 7-5/8 in. rise. (Up to three steps are self-supporting; more will require mounting on steel channels.) The cost per riser is \$185, including delivery and duty. Omate cast-iron newel posts are optional.



Steptoe's new straight stair.

The Barclay is Steptoe's new spiral stair. This stair is also sold in a bolt-together system for ease of shipping and installation. Each step has an omate open riser and a solid embossed tread. A selling point for this stair is its 5-foot diameter. It's sold with your choice of a steel

handrail (at \$185 per riser) or brass (at \$225 per riser); prices are FOB. Specify your interest for a free flyer; a complete catalog of all Steptoe's stairs is \$2. Steptoe and Wife Antiques Ltd., 3626 Victoria Park Ave., Dept. OHJ, Willowdale, OT, Canada M2H 3B2. (416) 497-2989.



The Barclay is Steptoe's new spiral stair.

Cumberland Customers:

We extend our sympathies to Cumberland Woodcraft Co., who had a disastrous fire at their Carlisle, Pennsylvania, millworks late in April. The fire completely destroyed operations at their main location, but fortunately, Cumberland was in the process of opening a second millworks in Maryland. They will continue to offer fine millwork from the new location. However, they ask for your patience in the coming weeks, both with new orders and those placed before the fire. Also, if you had sent an order to them in Carlisle, you should send a duplicate to their new address. Cumberland Woodcraft Co., Inc., 14 Maple Dr., Dept. OHJ, Thurmont, MD 21788. (301) 271-7181.

Exterior Paint Update

We have received official notification that Sherwin Williams is no longer offering their Heritage Colors colorcards. However, if your local dealer still has the color proportion chart (and you know the name of the color you want) you can easily have the color custom mixed. At the moment we still have a supply of Century of Color, an excellent book by Roger Moss describing and illustrating period exterior house painting. Each copy features a Heritage Color card, and the colors referred to in the book can be matched by most major manufacturers. Century of Color can be ordered from the OHJ Bookshop - see Order Form, page 113E - for \$15 ppd.

In honor of their 100th anniversary, Benjamin Moore introduced a new colorcard that we found very exciting. These are exterior colors, custom mixed, taken from about 75 years of archival color chips. Not a documented color selection, 100 Years of Exterior Colors nevertheless features appropriate body colors with complementary accent colors for doors and windows, all period inspired. Included are numerous earth tones, and there's a turquoise-green accent color that was commonly used on '20s and '30s houses. The new color chart is currently available free of charge at local dealers or by writing to: Benjamin Moore Company, 51 Chestnut Ridge Road, Dept. OHJ, Montvale, NJ 07645. (201) 573-9600.







THIS MONTH'S Remuddling was sent to us by Sharon Purchis of Charlotte, Michigan:

"I AM SENDING YOU two pictures of the same house, taken 70 years apart. All of the remuddling has occurred over the past 10 years, in spite of the protests of the neighbors, who are preservation minded and have been trying so hard to restore an historic neighborhood.

"THE REMUDDLER has done just about all he can do to destroy this house. Starting at the top, the tower has lost its peaked roof. Windows have been replaced with smaller

ones. Aluminum siding covers nearly all, with wide, flat trim at the windows.

"THE LOWER STOREY has vertical siding as well as the flat trim at the windows, which are now green-tinted thermopane.

"THE PORCHES at the front and sides were stripped off; the front was replaced with a small redwood and wrought-iron entry with a cedar-shake roof. One side now has an enclosed porch with more of the thermopane windows in various sizes.

"I AM SORRY TO SAY that the once-lovely Queen Anne is

right next door. It's a daily reminder of what an uncaring remuddler can do in the name of energy conservation."

MS. PURCHIS' photos and letter reinforce one of the basic points of our Remuddling series: What you do inside your house affects mainly you and your family; what you do outside affects everyone in the neighborhood, residents and visitors. Only one house has been altered with these trendy and short-sighted additions. But more than one house has been affected; an entire neighborhood has been compromised.

The Old-House Journal

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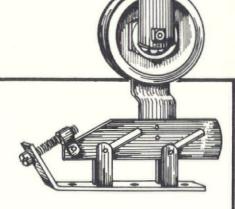
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The Old-House Journal

Restoration and Maintenance Techniques For The Pre-1939 House

July 1983 / Vol. XI No. 6 / \$2.



Repairing Top Hung Pocket Doors

by Patricia Poore Illustrations by Jonathan Poore

SLIDING DOORS. In a new house, they're the cheap closet doors that are always off the track. But in an old house, they're an irreplaceable treasure. Pocket doors close off a chilly room in winter, or turn a parlor into a private guest room. They are an ingenious feature ... except, of course, that they get balky when they get old.

WITH MORE PATIENCE than skill and hardly any expense, you can make them work smoothly again. It's nearly impossible to find somebody else to fix your pocket doors. Not that it's hard; it'll require simple carpentry, and perhaps some plaster patching. But a contractor is reluctant to do it (for a reasonable fee) because such trial-and-error jobs take an unpredictable amount of time. So in this second article, we'll concentrate on do-it-yourself repairs for different kinds of top-hung sliding doors. (In May, we described doors that roll on bottom tracks.)

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Rent A Mongoose?

We get loads of reader mail at OHJ. Assistant editor Cole Gagne has shouldered more of it than anyone in recent months... is it possible that coping with the volume has tempted him to put tongue in cheek when he answers some of the stranger ones? For instance, what do you tell a subscriber with rattlesnakes in her garage?

Dear Mrs. Athey,

Your problem is not typical of the questions we get at OHJ! However, I'll try to help you.

First, contact the office of your State Parks Department. They monitor things like this. It's unusual that the rattle-snakes would be in your garage; perhaps something has driven them out of their natural habitat. If so, neighbors will be experiencing the same problem -- the Parks Dept. would know. They'll also give constructive advice on getting rid of snakes.

Another source of advice is the Extension Service of your state university.

To my mind, the best thing you could do is buy a mongoose and let the little whipper massacre the snakes. I know it sounds wacky, but I'm sure it would

work, and I've heard that they make very nice pets. (Ask Rudyard Kipling.) Good luck!

-- Cole Gagne

And the unexpected answer two years later!

Dear Cole,

I took your advice...advertised for someone's pet mongoose and got it. The little rascal rid me of my rattlesnake problem and the neighbors' on each side and behind me. And the gophers are gone too.

> -- Bonnie D. Athey Tulsa, Oklahoma

I must confess, the more we thought about it, the more we wondered if she was pulling our leg. So we contacted Mrs. Athey, who assured us she was serious. The mongoose's name was George; she rented him for \$15 per month for a summer. His owner walked him around the perimeter of her yard and told him that was his territory. He never tried to escape from the yard. The owner also told the mongoose not to bother the dog or the cat. He didn't. (The dog and cat kept their distance, too.) George got rid of all the rattlesnakes and a few of the largest king snakes, but never bothered with the small grass snakes. He didn't kill the gophers, though. It seems that when word got out via the gopher grapevine, they packed their bags and left. -ed.

Porcelain Refinishing — Does It Work?

DESPITE the number of questions we get about porcelain refinishing, we're reluctant to write a feature article about it.
"Does it work?" The unsatisfying answer is, "It depends."

The process itself is neither a paint job nor a refiring of the porcelain glaze. Rather, it's the application of a high-tech coating over a surface that has been carefully cleaned and etched with hydrofluoric acid to provide the right porosity for a good bond. Timing and good surface preparation make the difference between a job that might last 10 or 15 years, and a botched job that won't last a year.

Applicators need intelligence, patience, skill, and time. It seems there are a lot of fly-by-nights out there who are ignorant of the process they're trying to use. Also, there is absolutely no regulation of the industry, no standards. So if you're going to have the work done, hire somebody who has been

in business a while and who'll give you references.

By the way, don't waste your time with a do-it-yourself kit. They simply don't work.

With so many handsome reproduction tubs and sinks now available, cost is the primary reason to save an old fixture. If it would cost a lot more to buy a similar fixture and have it installed, then it makes sense to rescue the old one. The work can be done in your house, so tile doesn't have to be reset or plumbing disturbed.

Our products editor, Joni Monnich, has been collecting case histories from readers. She'd like to hear from you if you had a fixture refinished more than two years ago. Please tell us: (1) What process was used? (2) When was it done? (3) What do you use to clean the tub or sink? (4) Does the fixture get light, medium, or heavy use? (5) How is it holding up? —ed.

OHJ's next issue will be the August/September double issue. Look for it early in September.



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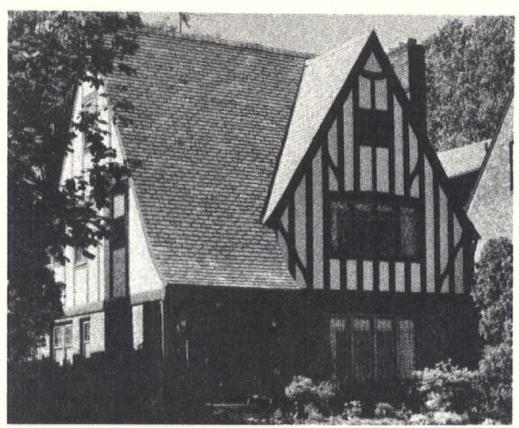
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Post-Victorian Domestic Architecture

The Popular English Revival Style

By Bruce Lynch

HE ENGLISH REVIVAL peaked in America between 1910 and 1930, leaving a legacy of handsome, tasteful homes. The basis of the style was the English Arts and Crafts movement, a reaction to excesses in Victorian taste. Ironically, the English Revival revels in Romantic sensibility to a degree that even the Victorians themselves might have thought excessive.

THE REVIVAL looked back to house styles that had developed in England throughout the Medieval period and reached their height during the reigns of Queen Elizabeth I (1558-1603) and King James VI (1603-1625). The post-Victorian blend of Elizabethan and Jacobean architecture produced three sub-categories of house styles: Suburban Tudor Manor, Cotswold (or English) Cottage, and Country Estate. These houses were designed by architects who sought not to slavishly imitate the past but to recover a vocabulary of forms and materials suitable for achieving "domestic character." They represented modern architecture, addressing the need for new kinds of housing.

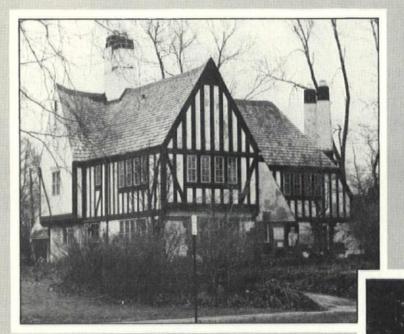


Ernest Mayo's design for this 1894 Evanston residence includes Arts and Crafts detail on an essentially vertical American Queen Anne. The half-timbering, two-storey window bays, and porch with Tudor archways are preludes to the full-blown English Revival. Note touches that suggest "craftsmanship": the curvilinear bracing in the gable and trefoil panels below in the attic windows.

VERALL MASS of the English Revival house is defined by steep gabled roofs that sweep almost to the ground. Facades are enlivened by bays, oriels, and leaded-glass casement windows grouped in pairs. Chimneys are massive and executed with uncommon sculptural effects. Each flue was often expressed by intricate brickwork and capped with fanciful terra-cotta chimney pots.

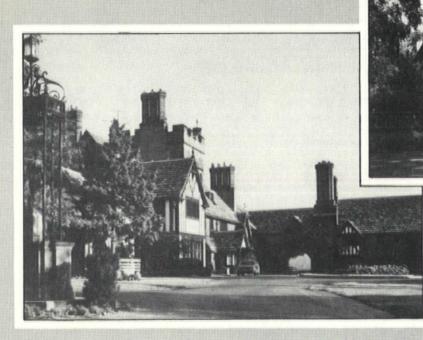
THESE HOUSES were usually constructed with the finest materials; those of local origin were especially prized. Roofing was occasionally rustic red tiles but more often slate graduated in size to accentuate the steeply pitched roofs. Walls were stone, stucco, or brick, with mixed colors and materials. Unusually skilled craftsmen were required to set such varied materials with pleasing results.

STONE WAS TOOLED for parapets and battlements, and terra cotta fired for gargoyles, finials, and crockets. Zinc, copper, and lead were fashioned into gutters, leaderheads, and downspouts, often with beguiling results. Iron was cast or



Left: SUBURBAN TUDOR MANOR — This picturesque model house was designed in 1922 for Shaker Heights. In fact, a sketch of this house was featured on the cover of the advertising brochure for Peaceful Shaker Village in 1927.

Below: COTSWOLD COTTAGE — The slate roof and stucco walls blend harmoniously with the natural environment and weather gracefully to give the house the romantic patina of age.



Left: COUNTRY ESTATE — These large, complex structures (this one complete with battlements) were usually built with at least 5 acres and carefully sited in the landscape at strategic locations.

wrought into gates, fences, and hardware. Strapwork for hinging mighty oaken doors and securing downspouts was hammered with distinctive floral or fleur-de-lis patterns.

THE ENGLISH COTTAGE STYLE relied on simpler forms and materials, whereas the Tudor Manor and Country Estate were often ambitiously enframed with beamwork or "Tudor half-timbering." Although non-functional, these beams gave English Revival houses the illusion of massive timbering.

SMALLER HOUSES were limited by the confines of their lot, but Country Estates enjoyed a wonderful relationship with meadows, hillsides, ponds, and streams. Interior spaces were open even in Cottages, which focused on the hearth and inglenook. Floor plans of larger Country Estates pivoted on several baronial fireplaces. Flowing interior spaces such as the entry hall, living room, and dining room were embellished with plaster friezes and handsome panelling. Wood-trimmed windows gazed out on attractive vistas. These houses were long and narrow-sometimes one room deep--and extended into the garden with walls, terraces, pergolas, and sometimes a sun porch. Intimate cobblestone courtyards or enclosed gardens were often formed by the side wing of the Country Estate or adjacent garages and stables in matching picturesque styles.



The house at the bottom of page 117 illustrated architect Ernest Mayo's transition from Victoriana to the English Revival. These two photos demonstrate how far Mayo progressed. The house at left was built in 1909, after Mayo had experimented with various Tudor house designs, and is an elegant fusion of Elizabethan and Jacobean styles. The Elizabethan elements are the half-timbered central hall and dor-

EVELOPMENT OF THE COUNTRY ESTATE and its Tudoresque trappings was made possible by prominent financial, political, and social leaders. Imbued with romantic nostalgia from a sojourn in their humble European origins, they returned to America and promptly erected sumptuous and serene estates complete with gardens, stables, gatehouses, servant cottages, garages, and of course manor houses.

IN DEARBORN, MICHIGAN, Henry Ford reconstructed a Cotswold Cottage stone by stone from his ancestral Scottish village. In 1915, Ford built an informal Country Estate complete with sun porches and pergolas. Called Fair Lane, it was a heavy-handed interpretation of a baronial hall. Naturally, lesser capitalists embarked on comparable flights of fantasy, constructing cottages or building facsimiles



mers, and the varied bays and oriels. From the Jacobean era come the overall symmetrical organization of the house and its massive brick gable ends with decorative stone parapets and ball finials. The house at right is a Cotswold Cottage designed by Mayo in 1919. Its plain stucco walls, shed roofs, rounded eaves, and hooded dormer suggest that Maid Marion might beckon Robin Hood from the porch.

in the new Tudor Revival style--hence the derogatory label "Stockholder Tudor."

IN ENGLAND, Ebenezer Howard's book To-morrow (1898) inspired the progressive Garden City movement, which advanced the acceptance of more modest stucco houses in the Cotswold Cottage style. Letchworth, Bournville, and Hampstead were new English towns by Planner-Architect Parker & Unwin, based on Howard's ideas. America's idealistic architects, developers, and industrialists toured these English prototypes and subsequently adapted the rustic, cottage-like houses to American suburbs such as Shaker

Heights, Oh., Forest Hills, N.Y., and Kohler, Wisc.

The English Revival Style was sometimes successfully adapted to various building types by clever designers. Pictured at left is a commercial corner block with flats above in Shaker Heights. Coyly articulated with stone, stucco, brick, and slate, the buildings come to resemble an English village street scene. The house in the picture below was originally a gas station, one designed to blend with the English style homes and suburban neighborhoods of Chicago's North Shore.





THE BASIC IDEA behind these American suburbs was that the health, morals, and future prospects of the lower classes could be vastly improved in a new community away from the crowding, filth, and exploitation of the city. The little English-style house with its sunny garden suggested the appropriate "Home Spirit" necessary to foster social improvement--while turning a modest profit.

FTER WORLD WAR ONE, the English Revival achieved outright popularity. The style took on political significance, becoming an affirmation of victorious English-speaking nations. A physical expression of a common English heritage, the Tudor style became the symbol of world peace and prosperity. Advertisements of the period used a backdrop of multi-gabled houses as they hawked automobiles and household goods provided by a democratic society based on English common law and free mercantilism.

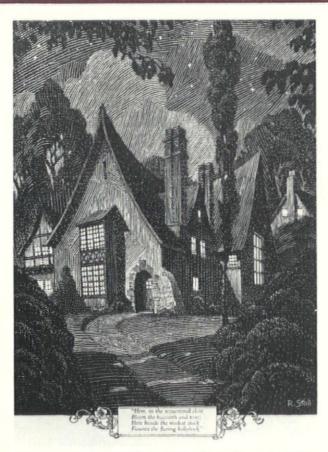
WITH ALL THESE cumulative associations, the English Revival enjoyed immense success. Design of the small house became the international architectural preoccupation of the day. European and American architectural journals

highlighted the work of English architects M.H. Baillie Scott and C.F.A. Voysey for their smaller artistic houses, addressing the complex issues of suburban housing. American architects such as Philip Small, Ernest Mayo, and Charles Schneider were often of British ancestry or education. Their work expressed their own professional bias as well as the consensus of clients possessed by Anglomania.

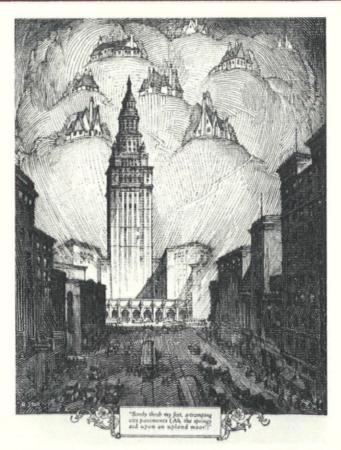
IT SEEMED ALMOST PRE-DESTINED that English Revival houses should appear in villages near America's five great cities of the 1920s--New York, Chicago, Philadelphia, Detroit, and Cleveland. After all, what greater dream could these eclectic architects envision than a city of gleaming towers surrounded by sylvan English-style suburbs?

BRUCE E. LYNCH, an architect and architectural historian by training, recently became Executive Director of Wisconsin Heritages, Inc., a state-wide preservation group that operates the Pabst Mansion in Milwaukee. Formerly with Historic Landmarks of Indiana, and most recently with Building Conservation, he has an intense interest in early 20th-century suburbs and their architecture.

All photographs by Bruce Lynch.



Advertisements for English Revival homes in Shaker Heights featured woodcuts that displayed the romantic character of the style and the "fairy tale" charms of the houses. The one at right illustrates a lofty vision of the Van Sweringen brothers, the developers of Shaker Heights: a modern metropolis where rapid transit lines emanate from the city center to outlying suburbs graced with



wonderful houses in the Norman, Colonial, and English Revival styles. The captions for these 1927 illustrations are as romantic as the woodcuts. Left: "Here, in the sequestered close / Bloom the hyacinth and rose; / Here beside the modest stock / Flaunts the flaring hollyhock." Right: "Sorely throb my feet, a-tramping city pavements (Ah, the springy sod upon an upland moor!)."

by Clint Miller Illustrations by Larry Jones



Last month, the basics of good fence construction were laid out in the Design File on pages 101-103. In this case history, a reader describes how he researched and built a high-style wood fence . . . and even tells what he'd do differently next time.

REVIVING A FENCE TRADITION An OHJ Reader Builds An Extraordinary Picket Fence

Y HOUSE SITS on a small city lot in Seattle. But it was built with neo-Georgian details, and is reminiscent of late 18th-century New England. A photograph of it in a 1915 issue of Architectural Record shows that it never had a fence -- just the rocky landscape which still exists.

BUT MY WIFE AND I wanted a fence to enclose the front garden (which is actually on the gambrel side) -- a fence that would complement the architecture of the house. So I spent several months pleasantly engaged in research, which led me first to catalogs of the 1920s. I found that revival fences were quite popular early in this century (my house was built in 1914).

NEXT I RESEARCHED the real thing: New England fences of the Georgian and early Federal periods. Most especially, I became fond of Samuel McIntire, a celebrated Salem (Mass.) carver and designer. I discovered that some of his rather imposing Adamesque fences were added circa 1800 to the properties of earlier, simpler buildings. My new-found enthusiasm for paling (picket) fences raised my level of taste, affecting what I thought should pass for good fence design. Nonetheless, my wife and I finally agreed on a traditional wood fence of our own unique design, influenced by McIntire.

BUILDING THE FENCE was a family project; we enjoyed talking to passersby who stopped to admire it. I discovered, however, why few such fences are built today: The project was planned as a three-week job, but it actually took us nearly three months!

UR FIRST CHALLENGE was to determine the best height for the fence. I stretched a string, representing the tops of pales (or pickets), between tall stakes driven into the ground, then viewed the potential heights from across the street to see whether the fence would block or complement the house.

FIR IS THE predominant wood in our fence. Inexpensive and readily available in the Northwest, it will stand up even in our wet climate $\overline{\text{IF}}$ it's treated with wood preservative, prefer- $\overline{\text{ab}}$ ly by dipping, especially at joints and all exposed end grain. Most critically of all, a good coat of paint must be maintained.

Setting The Posts

HOUGH SETTING the posts directly into concrete was common, we decided to try a more rotproof procedure we'd seen used in Seattle. The center core of each post was predrilled 12 inches deep to slip over a 2-3/8 in. galvanized pipe set into the concrete; this left the post clear of the ground by about 3 inches. The trouble was, boring out the 6x6 post cores perfectly true proved to be a job only a machine shop could do. We found a cooperative machinist, so the cost wasn't exorbitant.

[Galvanized or painted steel fence-post anchors, available at large lumberyards, are an alternative to the fussy pipe method. See drawings and description in June 1983, p. 101. --Ed.]

A SIMPLE post-hole digger sufficed to dig the holes. (These can be rented.) Pre-mixed fence-post concrete mix sets up in less than 30 minutes. At ground level, I finished the concrete into neat squares while the mix was still wet. It was imperative that all pipes extend the same distance above the base line of the fence, which I'd marked out earlier with strings tied to stakes at all four corners. The line on the front or street side was perfectly level, while the two side base lines sloped upward to the house, following the contour of the ground. These string lines were tautly in place during the setting of the pipes, which had been marked with a felt pen 12 inches down from their tops: The mark was then lined up exactly with the base string.



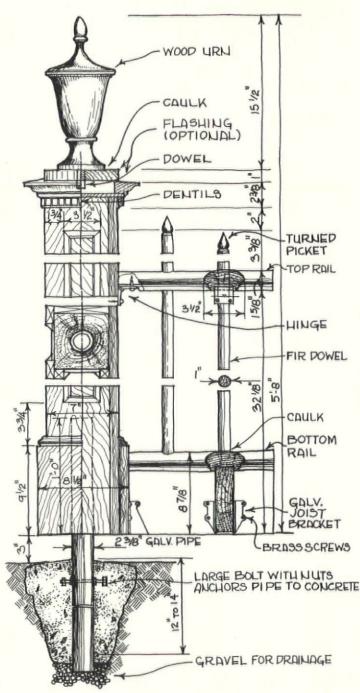
The author and daughter Wendy are shown attaching the base trim to a built-up post column using butt joints.

Built-Up-Posts

POSTS WERE CONSTRUCTED out of pressure-treated 6x6s (actual size 5½ in. square) which were then sheathed with 1-inch (actually 3/4-in.) fir boards, giving an overall actual finished dimension of 7x7 inches. To create inset panels in the sides of posts, I simply cut a square hole in the sheathing board the size of the panel. As this left the cut-out panel too deep, I filled each one with a 3/8-inch-thick board and then finished the inside edges with a standard mitred moulding. The broader base of the post is simply a second layer of 1-inch fir, capped with a standard moulding.

EACH CORNICE consists of standard fir cap moulding that surmounts a bed moulding with pre-cut dentils. I purchased this denticulated stock at a paint store; their decorative mouldings, made in Italy, are of unidentified wood and, I'm afraid, the stock has shrunk and checked. I'll probably replace it with the identical pattern in fir. (Specialty mouldings are available from some millworks, if you're willing to buy by mail. See the OHJ Catalog.) I cut a bevelled slope on the cap moulding to aid water runoff.

THE TOP VASES or urns are "after the manner" of Samuel McIntire. I arrived at the final design and size after holding countless paper mock-ups in place. I had a local custom millwork shop turn them out of Alaskan yellow cedar, a closegrained, weather-resistant wood known to boat builders. A short wooden shaft was left on the bottom of each urn to be anchored down inside the post. A long brass wood screw brought in from the side secures the shaft and stabilizes the urn.

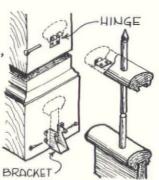


WOODEN PICKET FENCE DETAILS

Rails

OR THE HORIZONTAL RAILS, I couldn't find appropriate exterior stock locally. Traditional rail design calls for a curved top for water runoff, and moulded sides to lighten the effect. Stairway handrail is really exactly what is needed, so we had some specially run, wider than average (3 inches), and with a routed-out groove in the bottom. On the lower rail, this groove accommodates a 2X8 plank that serves as the fence base.

SIMPLE construction details where rails meet posts allow for easy disassembly of the fence whether for maintenance or to transport large objects into the yard. I used galvanized joist hangers on the bottom to support the 2x8 base, and simple square hinges with removable pins under the top rail to secure it to the post.





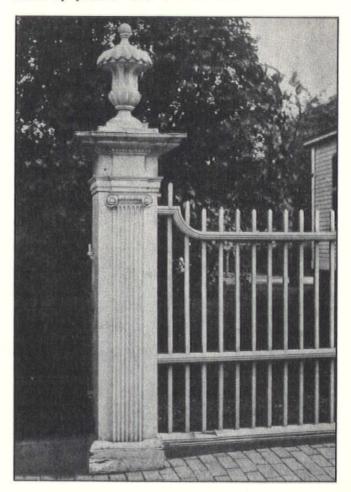
A gentle, dipping, curved effect is created by varying the picket lengths, similar to the more complicated ramped top rails seen on some early fences.

[Notes on post and rail stock: In many regions, rough cedar fence posts (used by farmers and ranchers for stringing barbed wire) are readily available. You'll be sheathing them anyway, and they're naturally rot resistant. Rails and other moulded stock may be cheaper readymade than custom milled, even if you have to pay for shipping. Always compare. --Ed.]

Pickets

OWELS in the diameter we needed were available only in hemlock, which weathers poorly. Consequently, we got a local hardwood dealer to make a special run of 1-1/16-inch fir dowels. The spear point and ring top on the pickets were turned by a machine shop on a metal lathe. This technique, we found, was much faster than trying to center and turn each dowel on a wood lathe. A single metal blade ground by a machinist allowed each dowel point to be turned in just seconds.

WHEN DRILLING the rails to accept the dowel pickets, a drill press will keep the pickets truly plumb. The pickets were toe-nailed into the bottom rail with brass boat-builder's brads. A high-quality, exterior, paintable caulk seals up joints from the weather.



An early wooden fence in the McIntire tradition, showing a highly ornate, built-up post, square pickets, and a ramped top rail. Located in Salem, Mass.



The new fence echoes the architectural detailing of the house. Notice the similarity of the pilasters and fence posts, the sweep of the pickets and curve of the roof. Stair stepping of the fence and good ground clearance are all construction details worth noting.

Gates

HE GATES are really just hinged sections of the fence, without the 2x8 base, opening inward only. Oblique cuts in the rails formed the gate stops; however, swelling of the wood in damp weather has caused some sticking problems.

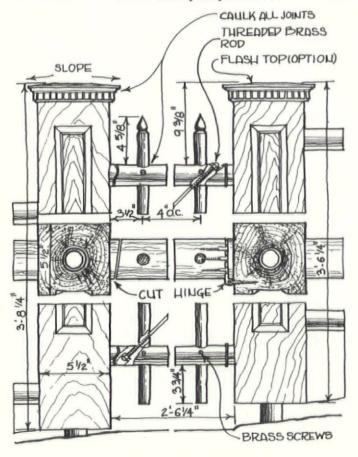


Early gate posts and gate in Salem, Mass. The floral detailing on the gate posts was designed to match that found on the house. Notice the light-weight gate with tension rod, similar to author's gates. Also note the points of most severe weathering, on the post cap and base.

To cure this I will need to alter the gates slightly to use metal gate latches. The gate hinges are modified strap-pin shutter hinges with 3-inch brass Brass hinges (available screws. at marine suppliers) would perhaps have been a good investment, as they last a long time and (Rust stains paint.) don't rust. A threaded brass rod, run diagonally through the gate, effectively helps prevent sagging (see below).

AGAIN, the more preservative the better, particularly on end cuts of the grain. Be certain the preservative can be painted over, first with a high quality primer, and then with a satingloss finish coat or two. With good construction details and regular maintenance, exterior wood will last a long time. Some portions of the New England front fences have weathered 175 years.

OUR PROJECT has made us very fence-conscious. The right fence amplifies and defines the architecture of a house. Besides enclosing our garden, the fence has enhanced the image of our house from the street: The rather plain gambrel end of our home is now one of the house's more attractive perspectives.



WOODEN GATE DETAILS

No~Sag Garden Gates

GATES SAG BECAUSE a square (or rectangular) frame is essentially unstable. Unless it is braced or pulled into tension, it can too easily twist. The tendency toward twisting is exaggerated by the fact that a gate is held along only one side. The free side sags from its own weight and from the trauma of being slammed. (And

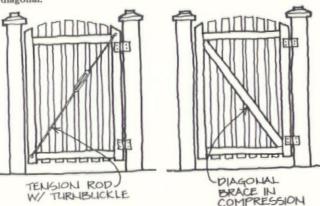
do you remember swinging on the backyard gate as a kid?)

Basic construction for a gate follows the same principles as the rest of the fence. (See OHJ June, 1983, pp. 101-103.) Strength is more important here because a gate moves — and slams. Sink posts into concrete; use heavyduty fasteners; make good strong joints. Screws work better than nails.

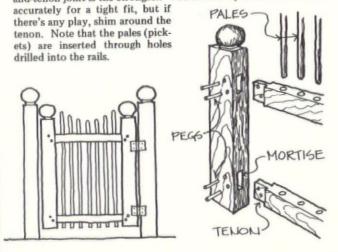
Three basic ways to build a gate that doesn't sag are illustrated in this Design File. The first two involve the principle of triangulation — introducing a diagonal to stabilize the square frame.

(1) The tension solution uses a rod or cable and a turnbuckle, as shown, to keep the frame from twisting out of square. (2) The compression solution makes use of a solid brace along the opposite diagonal.

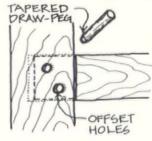
SAGGING GATE



(3) Rigid woodworking joints will also keep a gate from sagging. Rigidity will keep the gate frame from twisting. A pegged mortiseand-tenon joint is the strongest. You should try to cut the mortise

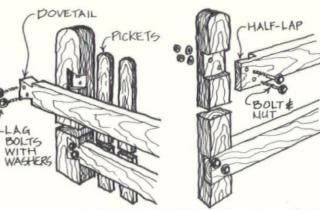


To ensure a really tight mortise-and-tenon joint, drill the holes in the tenon just a bit off center from the holes you drill in the side of the post. That way, when you drive the pegs, they will act as a



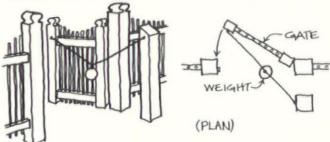
wedge, tightening the joint. This is called a draw-peg joint. (Taper the ends of the pegs to help them go in easier. Cut the mortise a bit deep to allow for draw.)

A dovetail joint is a second alternative. And easiest to cut, but not as strong as the others, is the half-lap. Use a large, flat washer with the nut and bolt against crushable wood such as redwood.



CLOSING THE GATE: Rule No. 1 is, "Don't use a screen-door spring closer." There's just too much tension on one of these; such violent slamming will cause the gate to wrack and vibrate apart in no time.

The easiest solution is to forego automatic gate closers entirely—simply close the gate manually behind you. Or you can put the hinged gate post slightly out of plumb to encourage the gate to close itself . . . much as you set a refrigerator slightly out of plumb to make the door self-closing.



An early solution (still used most picturesquely at Colonial Williamsburg) is a weight on a chain, shown above.

No matter what the closing mechanism or the type of latch used, a stop piece the full height of the gate is very important. If the swinging gate is stopped against the post only at the latch point, it will wrack every time it closes.

HARDWARE SELECTION has only a few rules, at least from the practical standpoint. Use latches and hinges meant for exterior use, and that have unfussy mechanisms. Buy simple, heavy-duty hardware that will tolerate misalignment. Iron is the traditional metal, but it stains when it rusts. Brass hardware (you can buy it at marine supply stores) won't rust; you can camouflage it by painting it.

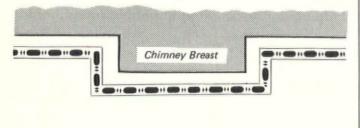
Restoration Design File #16

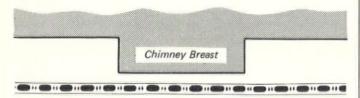
Stencilling Secrets

Techniques For Laying Out Border Patterns

by Clem Labine

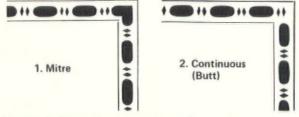
Accent Or Downplay Features - Fig. 1



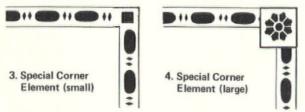


TOP: An architectural feature such as a chimney breast can be accented by a stencilled border on the ceiling that follows the outline of the projection. BOTTOM: By running a ceiling border right past the chimney breast, the visual impact of the projection is neutralized.

Ways To Handle Flat Corners - Fig. 2



1. Mitreing (joining the two legs at a 45° angle) makes a neat corner. But the technique is time-consuming, and isn't often used on large jobs (see Fig. 4). 2. With a continuous, or butt, joint, the pattern on one leg picks up where the other leaves off. This is fast and easy, but with some patterns you'll get awkward relationships at the corners.



3. Inserting a small corner element gives the corner a more finished look. The corner element can be one part of the pattern that you cut out and use as separate corner stencil.

4. Introducing a dramatic element can make an emphatic statement at each corner. If the corner element has its own edges, you can but the border pattern to it.

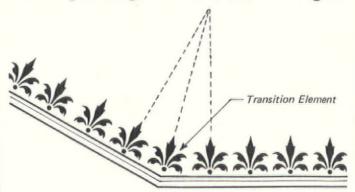
AST MONTH's stencilling workshop presented ideas on selecting patterns, making stencils, and applying the paint. This month, we'll look at the part of stencilling that's hardest for the beginner: laying out the patterns and handling awkward spaces like corners.

ON REALLY SOPHISTICATED JOBS, the stencils will be scaled so they fit a space (such as a wall) exactly, with no odd fractions of a repeat left over. Most of us don't work with that precision, however. Usually, we'll create the stencil pattern, then figure out how to fit it to the space available.

IN THESE TWO PAGES, we'll look at the most common problem: the fitting of border patterns. These are the dilemmas you'll face when making stencils for chair rails, friezes, coves, ceilings, and around doors and windows.

AKING A 90° turn on a flat surface, such as around the top of a door, can be handled in several ways, as shown in Fig. 2. More difficult are inside corners, such as where two walls join. Inside corners are discussed below, in the section on friezes. Most difficult of all is the corner in a ceiling cove; there you're dealing with two joining curves. It's almost impossible to bend the stencil into a cove corner so that you can apply paint without dripping.

Handling Changes Of Direction - Fig. 3



When a border pattern has to turn to follow a ceiling moulding or stair rail, a single element from the pattern can be cut out and stencilled at a transition angle. To work it out so a full element lands precisely at the turn, you may have to "cheat" the space a bit as shown in Fig. 5.

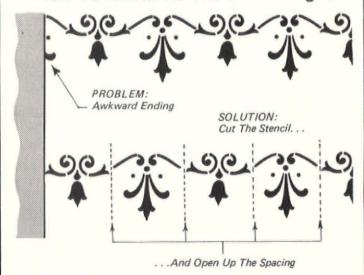
COVES ARE BEST HANDLED by leaving the corners until last, skipping space as required. After all the straight stencilling has been done, you return to the corners and CUT the stencil so you can extend the stencil into the corner without bending. After one side of the corner is painted, you do the same with the other side. If you run out of stencil to cut, you tape the first one back together with masking tape and make new cuts as required.

HERE ARE TWO basic ways to lay out a frieze border that encircles a room at the top of a wall. The first method is to start in the least conspicuous corner and run the pattern continuously around the (At the corners, you can crease the stencil. Or you can skip the corners and come back and finish the corners by cutting the With this stencil as described previously.) method, you may come out with an awkward section of pattern left over. If you stop a few feet in advance of the finish, you can determine if you'll have an awkward "leftover." If so, you can cut the stencil apart and make minor adjustments in the spacing(stencilling one element at a time) that will permit you to end on a whole element (Fig. 5).

THE SECOND basic way to lay out a frieze is to treat each wall separately, stencilling it from corner to corner. With this method, you don't care whether the pattern matches at the corners. You can start the pattern in the middle of the wall and stencil to the corners, or start at one corner and run to the next corner (Fig. 6).

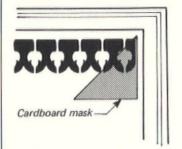
TO DELVE FURTHER into stencilling techniques, consult Adele Bishop's "The Art of Decorative Stencilling." If you can't find it in your bookstore, it's available in the Bookshop listings at the back of this issue.

How To Cheat At The End - Fig. 5

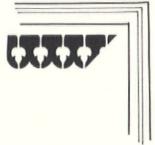


(TOP) When a border pattern is run continuously around a room, you often end up unevenly. (BOTTOM) If you pause five feet before the finish and measure how the pattern is going to end up, you can cut the stencil apart and insert a small amount of additional space between the elements so that you finish evenly.

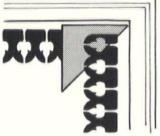
How To Make A Mitred Corner - Fig. 4



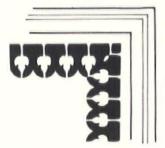
 Cut a piece of cardboard at a 45^o angle, and tape it so that it bisects the corner angle. Make sure stencil pattern overlaps the mask at every point.



 Lift carboard mask, revealing perfect mitre. Allow paint to dry. If you transfer the cardboard mask immediately, you may smear paint.

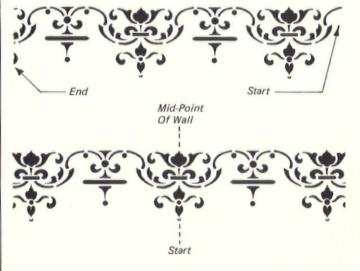


3. Tape mask on opposite side of the 45° angle. Make sure stencil fully overlaps the mask so you'll have a full meeting of the pattern in corner.



4. Lift mask. If the stencil hit the bisecting angle at the same point in the pattern, you'll have a perfectly symmetrical corner.

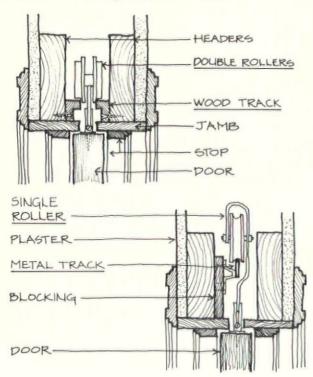
Border Between Two Walls - Fig. 6



(TOP) One way to apply a frieze pattern around a room is to stencil each wall separately . . . corner to corner. When you do this however, the pattern usually comes out differently at each corner. (BOTTOM) A better way to apply a border to a wall is to start at the mid-point and work the pattern evenly to each corner.

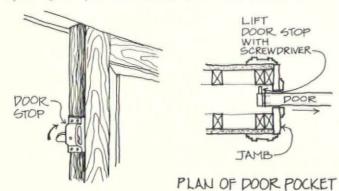
sliding doors continued from page 115

BY SHINING A FLASHLIGHT up into the track opening above the doors, you can tell which of two types of top-hung sliding doors you have. The first type has side-by-side rollers, front and back, which roll along matching wood tracks. The other major type has single rollers (front and back) on a single metal track.



Making Adjustments

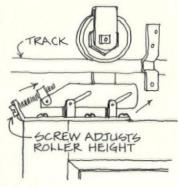
BALKINESS and unpleasant noises can sometimes be treated by oiling the rollers. Use an aerosol lubricant that comes with a plastic extension nozzle. (Brand names include WD-40 and Tri-Flo -- get it at any hardware store.) You'll have to release the rear stop on the door to roll the door all the way out into the opening so you can reach the back rollers.



QUITE UNLIKE pocket doors that roll along a floor track, top-hung doors are stopped from rolling out too far by a retractable metal or wood finger mounted on the rear edge of each door. The finger catches on the jamb when the door is rolled out into the opening. To release the door, you have to retract it: Pull

the door out as far as it will go, then slip a screwdriver or a piece of stiff cardboard in to flip it up.

VIBRATION or house settlement may have caused the doors to bind either on the floor or along the track above. The height of the rollers is meant to be adjustable. If the door is scraping the floor, try turning the adjustment screw to pull the First, door upward. tap some shims under the door to temporarily hold it about 1/4 inch off the floor. After

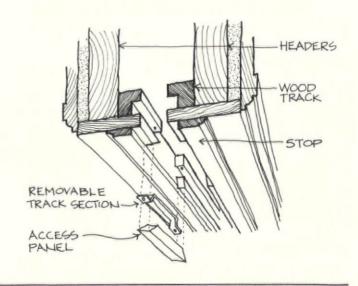


the screw is turned and the shims are removed, the door should hang at least 3/16 inch from the floor. If the door is binding on the track above, again adjust the vertical position of the doors with the screw on the hanger: This time, turn it so it lowers the door instead.

THE STOP MOULDINGS which guide the door along the side jambs or along the top track may be loose or warped. Carefully remove the stops and re-nail them in the correct alignment. Sometimes the door itself has warped, causing it to bind along the stops. It is very difficult if not impossible to correct a warp in a door, so try simply moving the stop mouldings out of the way instead.

Removing the Doors

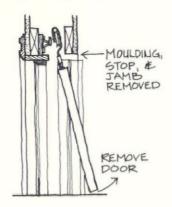
ANYTHING MORE than simple oiling and vertical adjustment will require that you remove the door (or doors). For example, a door may be dragging along the floor to an extent that can't be fixed by mere hardware adjustments. So you'd have to remove the door to trim it at the bottom. If the doors need repair, extensive refinishing, or replacement, you have to get them out. And if the track or rollers are disconnected, broken, missing, or loose, you can only get at the problem if the doors are out of the way.



IF YOUR DOORS are the side-by-side roller type, hung on wood tracks, there is probably an access panel at the top. (Part of the upper track is removable in this case.) With the access panel removed, your hand can reach in above the door to unscrew the flange which attaches the roller assembly to the top of the door. Once the roller is unscrewed, bring it out through the access panel. Now move the door into a position where you can reach the other roller as well through the access panel.

IF YOU HAVE TO remove the other door, too, go through the same steps on the other side (the other wood track).

FOR WOOD-TRACK DOORS with no access panel, try removing the stop, jamb, and wood track on one side only. If that doesn't provide enough clearance to unscrew the roller from the door (or to pull the roller assembly out), then remove the other side of the upper track, too.



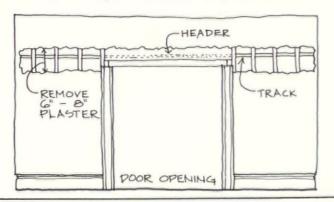
HOWEVER, lack of an access panel usually means that the doors are running on a metal track. A metal track is attached to only one side of the overhead framing.

SO REMOVE the casement moulding, stop, and jamb only on the side opposite the track mounting. Now you can slip the door out with the roller assembly still attached to the

door. And the track will still be in place above. Of course, if there is not enough clearance to remove the door because you can't get the roller past the track, you'll have to unscrew the roller assembly from the top of the door.

Going Through Plaster

M AJOR WORK on the overhead track will require some plaster demolition. You need only remove plaster along one side of the track, enough to expose the entire track assembly. (The trim, stop, and jamb on that side should have already been removed.) If you're just repairing the existing track or replacing it with a similar one, remove a 4- to 6-inch swath of plaster. If you're replacing the track mechanism with modern hardware, more plaster has to go -- see drawing further on.



THE LEAST EXPENSIVE option requires the least demolition: Repair the existing hardware if possible. Salvaged old hardware is another choice. Warped wood tracks can be duplicated by anyone with modest carpentry skills. If the hardware is missing, or if it's so far gone that it will never roll smoothly again, you can change over to a modern sliding assembly.

Source for New Hardware

Our recommendation is Grant Hardware Company's No. 5000 Sliding Door Hangers. These have ball-bearing action, not exposed rollers. They mount easily, and can be used on doors of any thickness and up to 300 pounds. Contact the manufacturer if you have specific questions and to get the name of a local distributor: Grant Hardware Co., 20 High Street, Dept. OHJ, West Nyack, N.Y. 10994. Telephone: 914 - 358 - 4400.

Installing New Hardware

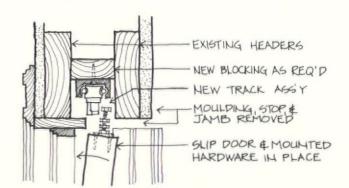
MOUNTING MODERN ball-bearing hardware is a little different from the old-style trolleys. You will need to put in blocking between the door framing above to provide a nailing surface for attaching the new track. (By the way, side-mounted hardware is also available, but it's harder to install.)

FOLLOW manufacturer's specifications for installing the new hardware and adjusting the height of the doors. Here's the procedure:

(1) Screw in the new track assembly overhead, with rollers already popped in place.

(2) Screw the new flanges to the top of the door. These will mate with the roller-and-track assembly you've installed above.
(3) Install the door and adjust the height

according to manufacturer's instructions.



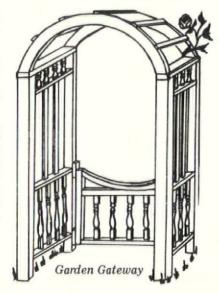
SOME OF THE NEW top-hanger hardware comes with a floor track, too, for guiding the door along. These are meant for use with bypass doors: those not guided by pocket framing, such as closet doors. If you have well adjusted old pocket doors that never had a floor track before, you don't need one now.

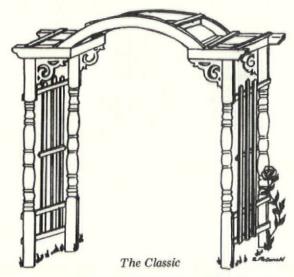
MOST OF THE INFORMATION in this article concerns the hardware and mounting of top-hung doors, because it's the hardware that makes them unique. Settlement problems, warping, and alignment were covered in our article on bottom-track doors. Please refer to the May 1983 issue of OHJ.



This Month: Outdoor Embellishments

If your old house is in the country, it probably had an arbor sometime in its past. Gazebo and Porchworks has already done the design and carpentry for those who'd like an arbor today. A simple model, Rosedale, is \$125, while the more elaborate Seated Arbor is \$750. These, and the two models shown here, are sold in bolt-together kit form; they're happy to make any size or detail changes you might request. Their catalog, \$2, also features gazebo and porch-trim kits. The Gazebo and Porchworks, 3901 N. Meridian, Dept. OHJ, Puyallup, WA 98371. (206) 848-0502.



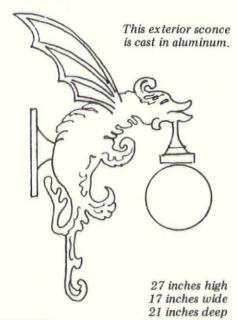


Indoor Embellishments

Readers are still asking about sources for real battleship linoleum (see the articles in Jan. & Feb. 1982 OHJ). Besides Tony Lauria (July, 1982), I've come across the Bangor Cork Co., another importer. They sell battleship linoleum in nine solid colors for \$16.70 per square yard; it's 1/8-inch thick, and 72 or 79 inches wide. Through Bangor, you can also order Marmoleum, linoleum with a marble pattern, in 33 colors. The cost is \$20 to \$26 per square yard. Available in only the 79-inch width, it comes in three gauges: 1/8-in., 1/10-in., or .080-in. Both battleship and Marmoleum are burlap-backed, and can be ordered direct or through a local distributor. For a free brochure, write Bangor Cork Co., Inc., William & D Sts., Dept. OHJ, Pen Argyl, PA 18072. (215) 863-9041.

Update on suppliers of lampshade fringe (OHJ March, 1983): M & J Trimming Co.'s beaded glass fringe ranges from \$12 to \$60 per yard. Silk fringe isn't offered, but they do have rayon from \$.98 to \$6 per yard. The selection changes constantly, so they don't have a catalog. If you can't visit the store, write with a specific request or send a sample for them to match. M & J Trimming Co., 1008 Sixth Ave., Dept. OHJ, New York, NY 10018. (212) 391-9072.

This gargoyle sconce isn't for every old house in America, but I couldn't resist sharing such an unusual discovery. Norcross Galleries, the designer, based the sconce on a late 19th century pattern, but used modern materials in its reproduction: The casting is aluminum, and the globe is unbreakable polyethylene. You can buy the sconce, \$75, unfinished or painted black, white, or green. Their catalog, \$2, shows many other unique designs in cast aluminum, including street lamps, fountains, and statuary. Norcross Galleries, 95 S. Peachtree St., Dept. OHJ, Norcross, GA 30071. (404) 448-1932.





In operation since 1709, Coalbrookdale claims to be the world's oldest continually operating foundry. Their Nasturtium cast-iron bench and chair won great acclaim when it was first shown at The Great Exhibition in London's Crystal Palace in 1851. Not priced for everyone's pocketbook . . . the 39-in. bench is \$899, the chair is \$799 . . . a limited number of these finely detailed castings is still being produced in England from the original patterns. The raw iron fur-niture, with polished English oak slats, is shipped to the U.S.A. ready for priming or indoor use; if existing stock is depleted, delivery may take 4-6 weeks. Selling direct or through distributors, the U.S.A. importer offers a free color brochure illustrating Coalbrookdale's furniture and cast-iron stoves. The Coalbrookdale Co., RFD 1, Box 477, Dept. OHJ, Stowe, VT 05672. (802) 253-9727.

Screen Doors

The bug season is upon us! Whatever type of flying critters you're trying to keep out, the screen doors made by the following companies will be a complement to your old house, as well as a bug barrier. Designs range from the very plain, some reminiscent of Craftsman woodwork, to ornate Queen Anne styles with abundant fretwork and turnings.

Four reasonably priced screen doors with minimal ornamentation can be mail-ordered from Remodelers & Renovators. Unfinished pine with aluminum screens, the doors are sold only in 32- or 36-inch widths. Prices begin at \$85 for a door with small sawn-ornament corner fans. Another, with turned spindles, costs \$125. Their complete catalog is \$2. Remodelers & Renovators, 611 E. 44th St., no. 5, Dept. OHJ, Boise, ID 83704. (208) 377-5465.

Solid oak screen doors with double-dowel joinery are made by Cascade. The doors are dipped in a wood sealer, and sold unfinished with an aluminum screen. Their six patterns, ranging from \$275 to \$425, are custom sized. A catalog showing all their doors is \$2. Cascade Mill & Glass Works, PO Box 316, Dept. OHJ, Ouray, CO 81427. (303) 325-4780.

The selection of 30 different designs from Old 'N Ornate starts with Beth's

Door - plain stiles and rails - and moves through more and more elaborate detailing. Made of Douglas fir, the doors are finished in your choice of stain and Spar varnish or paint (both in the color of your choice). Doors are custom sized and prices range from \$100 for Beth's to \$450 for a highly ornate door. All models are also sold as storm doors or burglar - resistant storm doors. (These



Nana's Door

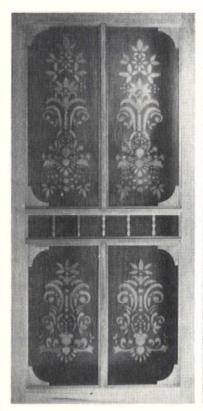
have Lexan acrylic glass and additional bolt locks.) Their catalog is free. Old 'N Ornate, 5175 Fox Hollow Rd., Dept. OHJ, Eugene, OR 97405. (503) 345-7636.

Heart-redwood screen doors in four detailed styles are manufactured by JMR. Glued and dowelled, these doors are sold unfinished (with no screen or hardware) for \$174.95 each. Stock widths are 32 in., 34 in., or 36 in., but custom sizes can be ordered. For a brochure, \$.50, write JMR Products, PO

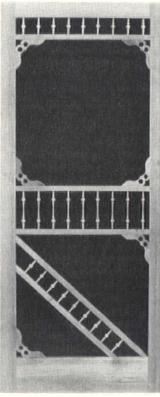
Box 442, Dept. OHJ, St. Helena, CA 94574, (707) 942-4551.

If you'd rather not stencil your own screens (pictured in OHJ July 1980), Mad River Woodworks has a ready-made answer. Their SD-101 door, \$165, features Victorian stencilling in white paint on its gray aluminum screening. The screen alone, perfect for a replacement on an existing door, costs \$25 per panel. They offer four other screen doors, all based on original 1860s patterns. Made from a light-colored hardwood (usually adler or poplar), these doors are sold unfinished. All doors are made to your size specifications. A catalog showing the screen doors and other Victorian-style millwork is \$2. Mad River Woodworks, PO Box 163, Dept. OHJ, Arcata, CA 95521. (707) 826-0629.

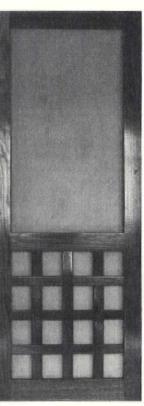
Need a screen door for your round-top or double-door entry? These are just two of the almost endless number of designs sold by Creative Openings. Other designs of special interest are a Craftsman style door, \$225, and their Queen Anne door, \$540. Made from solid white ash, white oak, or mahogany, these custom doors are mortised-and-tenoned, and sold with solid brass screens. Their catalog, \$3, gives you a good idea of their limitless design capabilities. Creative Openings, 1013 Holly St., Dept. OHJ, Bellingham, WA 98225. (206) 671-7435.

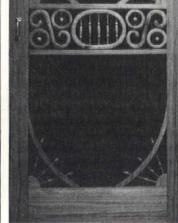


A stencilled door from Mad River Woodworks



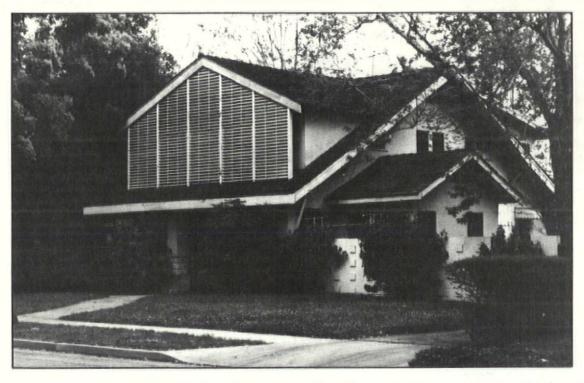
JMR's style B "The Sutter"





These two doors by Creative Openings show the range of screen door styles offered by the companies listed here.





HERE'S one Remuddling photograph that does not need a "before" picture. In fact, the saddest thing about it is the way it demonstrates how much havoc one thoughtless addition can create. And that incongruous innovation faces right out onto the street, so NOBODY can miss it.

MR. WILLIAM L. PENN of South Pasadena, California, sent us this photo. In his letter he comments on similar "fine old homes built prior to World War I. After World War II there was a surge to 'modernize' some of these homes ... Renovation sometimes included removing old outside shingles or siding and covering the out-

side with easy-care stucco." Whether the stucco is part of a previous remuddling pales in significance compared to the more obvious addition. "A neighbor of ours, a plastering contractor, managed to complete the ultimate modernization of his house and then moved on."

AHIT-AND-RUN REMUDDLER ... but what about the inheritors of the house with its jarring sun screen? "Although there is a strong movement to restore many of these fine old houses to their original glory, two subsequent owners of this home probably felt overwhelmed at the prospect of unmuddling the remuddling." We know the feeling.--Cole Gagne

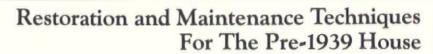


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Old-House Journal



Things You Should Know

About Old~House Plumbing

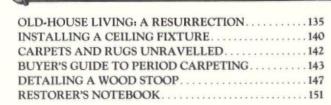
by Gary Feuerstein, P.E.

WOOD DEVELOPS A PATINA as it gets old; plumbing develops leaks. In other words, plumbing is one thing that doesn't get better as it gets older. From the moment they are put into use, pipes, seals, and fixtures begin to deteriorate. Throw in a remodelling or two, and it's easy to imagine that the integrity of a 60-year-old-plus system may be less than perfect.

SERIOUS HAZARDS LURK in plumbing which was installed or adapted improperly. Leaks and noise are minor irritations compared to the contamination of supply water or the escape of dangerous gases into a building.

IRONICALLY, real problems are often subtle and long ignored, while the more mundane, such as leaks, appear as minor disasters. This article will help you determine how bad your plumbing really is.

continued on page 158



STENCIL LAYOUT FOR LARGE AREAS15.
SUCCESS WITH STREET TREES15
BRINGING BACK A BUTCHER BLOCK16
LINCRUSTA MAKES A COMEBACK!
In the next issue

GHOST STORIES FROM READERS

Asbestos-Phobia and your house

SPEAKING OF PLUMBING, here's a question we've been hearing often lately: "I have asbestos pipe insulation in my cel-What should I do?"

"NOTHING" is the best answer -as long as it's intact, and you're not replumbing or remodelling the cellar space. Asbestos is dangerous only when it gets in your lungs, not when it's wrapped around a pipe.

WHAT IF it's friable -- crumbly and likely to become airborne? Don't remove it yourself. By the time you educate yourself on correct handling and disposal procedures and pay for a good respirator, you'll be wishing you'd hired somebody else to do it.

IF MOST of the insulation is still intact, you can wrap loose sections yourself in duct tape, or wrap it in kraft paper and tape the seams. First seal off the cellar. Wear gloves, a long-sleeved shirt (that you'll wash separately or dispose of), and a dust mask.

IF THE INSULATION is very crumbly -- or if it must be removed for replumbing or remodelling

-- hire a contractor to do the job. Usually, plumbers and insulation contractors are the right people to contact. But be prepared for a big bill: Many contractors don't even want the job. A quote we got from a full-service insulation contractor priced it at roughly \$2,000 for an average-size cellar. A few letters from readers tell the same story.

WHY SO EXPENSIVE? For one thing, they want to discourage jobs. For another, they're making up for exorbitant expenses on worker's compensation-The same reatype insurance. son accounts both for the lack of enthusiasm and the high rates: "Asbestos-phobia" among workers means a lot of downtime and the potential for lawsuits. Any cough, headache, or rash is immediately suspect.

DON'T FORGET to factor into a removal job the cost of new insulation. All in all, as-bestos is a lot like lead paint ... it's most dangerous when you disturb it. Leave it alone if you can.

- Patricia Poore

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Family Gossip

PSST...want to know what other OHJ readers are like? Right now we're in the midst of our first reader-preference survey. We mailed a questionnaire to a random sample of our subscriber list. It's an unusual survey, as it's for us editors, not for advertisers.

WE DIDN'T ASK questions about income and whether they'd been to Europe yet this year. (Those are the kinds of things advertisers love to hear about.) Instead, we asked about our readers' work -- and about their houses. Final survey results haven't been tabulated yet, but we can already spot trends. Here are some highlights:

- Not surprisingly, 80% of our readers are old-house owners. The other 20% are mostly professionals: craftspeople, contractors, architects, developers, designers, curators, and historians.
- · Ranked most to least, here are age ranges of readers' homes:

- 1) 1871-1899
- 2) 1900-1915
- 1840-1870 tied 4) 1916-1930
- 5) after 1930
- 6) before 1840.
- · Ages: About half are between 31 and 45. Next range is 45-60.
- Most common recent jobs subscribers have done themselves are paint/wallpaper stripping kitchen and bathroom renovation, plastering, plumbing, wiring, and work on porches, floors, and windows. Most recently hired out were plumbing and wiring jobs, roofing, and porch work.
- The most often-read departments are Remuddling, Restorer's Notebook, and Ask OHJ. Least popular is Helpful Publications.
- Many people mentioned liking our "no frills" format. Others appreciate the sources given. Then there's the reader who likes our "honesty, candidness, friendliness, and sense of humor."

THANK YOU...to all who answered.



Old~House Living ...

Tke Resurrection Of Kirkwood

By Claire Labine

N 1857, FOSTER MARK KIRKSEY began construction of his house, called Kirkwood, on the highest elevation in the town of Eutaw, Alabama, at the beginning of that sweep of prairie known as the "black belt"--land rich in limestone and marl, so fertile and favorable for the growth of cotton that surely it had been blessed by Demeter herself, and so became the most lucrative 13,000 square miles in the ante-bellum South.

MR. KIRKSEY'S VISION transcended the simple concept of house. Kirkwood was to be a place of harmony, productivity, hospitality, learning, and excellence--a civilized, joyful sanctuary where matters of the mind, soul, and heart were attended to as punctiliously as those of agriculture and commerce. The house took form, and a bride came to it. Children were born. But the economic structure upon which Mr. Kirksey based his vision was itself dependent upon slavery, and the vision was dispelled by the reality of the Civil War. The Kirksey family and Kirkwood were among the tens of thousands of spiritual casualties of that conflict: Disoriented and despairing, Foster Kirksey never truly recovered from the experience of 1861-65, and there was very little joy in Kirkwood for over a hundred years.

THERE IS A METAPHYSICAL POINT at which the deterioration of an old house intersects the amount of energy, time, money, and commitment required to save it. If deterioration passes that point, the house is doomed. Kirkwood had reached its point of no return when Roy Swayze found it. Roy and his wife Mary saved Kirkwood. With an elegant Southern sensibility--the favor promptly returned, a gesture generously repaid in kind--Kirkwood then saved Roy Swayze.

It Began With Pickles

HE KIRKWOOD-SWAYZE ROMANCE began in September of 1972, over a jar of homemade pickles. Roy Swayze was an eminent Washington attorney with a fiercely demanding practice, a comfortable home in Fairfax, and no interest in or time for old houses. A friend, Roland Monette, one night at dinner served a bowl of pickles made by his Aunt Ruby in Alabama. As the evening of good fellowship drew on, fueled possibly by a glass or two of charged water, the commercial potential of Aunt Ruby's pickles became clear. Production and marketing of this extraordinary relish, Roy and Roland assured one another, promised



Above: Kirkwood shortly after the Swayzes started restoration. By the time this photo was taken, the chimneys, foundation latticework, and masonry column supports had already been repaired. Note the woodpecker holes in the columns, clearly visible in both photos. Right: That's Love Wedgeworth, who contributed so much to the rescue of Kirkwood. Extensive scaffolding was required to remove all of the peeling exterior paint. (Kirkwood's exterior had not been touched by a paintbrush in 50 years.) Large propane torches were used to do the stripping—and lead poisoning for Love, Roy, and the Swayze family pets was an unfortunate side effect.

at the very least considerable wealth and more likely wealth untold. A few details remained to be pinned down--among them, Aunt Ruby's recipe. Roland and his wife had just bought an ante-bellum house (now restored and one of the spiritual centers of restoration-preservation in western Alabama) six miles from Eutaw; he proposed that the Swayzes accompany them to Greene County, look over the property, and he and Roy could cut a deal with Aunt Ruby.

IN THE LIGHT OF SOBRIETY, the pickle potential seemed dimmer, but they all flew off to Alabama anyway. The new old house was inspected, and the Swayzes found themselves caught up in the drama and excitement of the Monette undertaking. Driving back through Eutaw, Roy glanced out the window, up a gentle hill, and literally did a double take. "Stop the car," he said.

THE HOUSE CALLED KIRKWOOD was shrouded in vines. Grackle nests hung everywhere. Generations of woodpeckers nested in the cypress columns. Weatherworn and windbeaten, shutters askew, windows covered with black paper, the house was a desolate disaster. An intimation of what he could be getting himself into prickled Roy's unconscious. But he got out of the car anyway.

IN THE FACE OF ADVANCING CHAOS, the house's caretakers had retreated, closing off rooms as they became uninhabitable, papering windows, and moving on to the next line of defense. As a result, they created a time capsule that the Swayzes viewed through layers of dust, cobwebs, and gloom. Chests, desks, closets--whole rooms were preserved as they'd been left at the turn of the century. Roy found 17 leather trunks full of letters dated from 1830 through the 1860s; there were household accounts and journals. A 140-year personal history of a Southern American family was all around him. Roy couldn't go through 17 trunks of letters in the course of one afternoon, so he proposed to buy the house and all its contents.

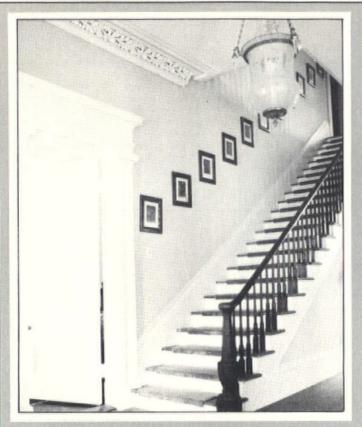


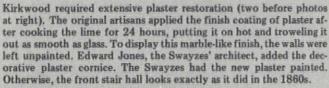
ROY AND MARY RETIRED DISCREETLY to the yard for a consultation. Seated on the stump of an ancient pecan tree, Mary, with consummate good sense, pointed out that the house was 900 miles from where they <u>lived</u>, and she was not about to give up her dearest friends and bridge and tennis partners for life among a million mosquitoes, no matter how in touch with the past. "Don't say 'no' again," said Roy, "I heard you the first ten times." Mary, a lady of the greatest humor, graciousness, generosity, and charm, is also a realist. She gave up.

The Commitment To Kirkwood

HE SWAYZES planned to begin their adventure by taking their two children, Mary's mother, and Roy's mother to Kirkwood for Thanksgiving--under conditions that all understood could be loosely described as "camping out." On November 5, Roy and Mary were at a meeting of the Tidewater Bar Association, and in the morning they strolled the grounds of Light Horse Harry Lee's house. Going up the stairs, Roy felt a pain in his chest. At 3 o'clock that afternoon, he suffered a massive heart attack. In intensive care at the hospital, he made a secret pledge to himself to retire.

ROY WENT HOME to creep around the house in pain. Roland Monette took his family to Kirkwood for Thanksgiving. At Christmastime, 1972, Roy and Mary went down to Kirkwood, and there, early on Christmas morning, Roy suffered a second heart attack.

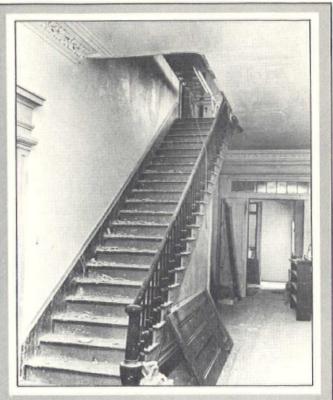


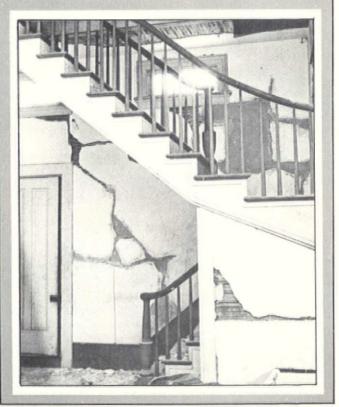


HE SURVIVED--and kept his promise to himself. Roy divided his practice among his law partners and moved from Fairfax to Kirkwood in the spring of '73. His commitment to the restoration of Foster Kirksey's vision was simple and passionate, perhaps crystallized by the peril he and Kirkwood had, at that point, in common. "If I die," he said to Mary, "I die. But I'm going to fix that house."

THREE THINGS HELPED SUSTAIN the Swayzes through that first year. First was their growing affection for and sense of responsibility to the Kirkseys, who were rapidly becoming as real and dear to Roy and Mary as past generations of their own family. Secondly, there was good advice from Edward V. Jones, restoration architect. "Keep it the way it was--and don't get in a hurry. Do one thing at a time, as well as you possibly can, and enjoy doing it right."

AND FINALLY came the Swayzes' introduction to Love Wedgeworth. Love began working on the Kirkwood grounds, which were in as desperate need of attention as the house. He became Roy's friend and colleague in the revival of Kirkwood, which experience changed his life as greatly as it did the Swayzes'. Love is now known as a restoration specialist, and the extent of his knowledge, the quality of his work, and his commitment to doing the job right have made him constantly in demand in Greene County.





The Return From The Past

N THE BEGINNING, with no water, no heat, no bathrooms, the state of Roy's health, and a string tying shut the oven door, did not the Swayzes occasionally question the sanity of their move? A vague wave of Mary's hand: "We've always done sort of outlandish things."



Virtually no work was done on Kirkwood after the Civil War. One such neglected detail was the installation of a railing on the second-floor gallery. Among the many documents discovered in Kirkwood was a newspaper account of how an aunt of Margaretta Kirksey had fallen to her death from the railless gallery in 1897. To prevent future tragedies, a section of cast-iron railing from a demolished 1855 house was located. To enclose the entire gallery, additional railing was cast in aluminum, using that original as the model.

WORK BEGAN on the foundations, and they discovered 12-by-12 beams riddled with termites. A search ... and authentic hand-hewn beams were found stacked in a nearby lumberyard. A section of the house was jacked up, the crumbling beams removed, the new beams put in place. Roy worked long hours on the foundation and spent an equal amount of time getting to know his new neighbors--who, amazed by the goings-on at Kirkwood, tended to drop by at unexpected moments. Exhaustion set in;

moments. Exhaustion set in; Roy moved in great pain at a snail's pace. At the end of a year, he looked at Mary and said, "What if I can't do it?" The answer to that was unacceptable, and Roy went to a Cleveland cardiologist, who diagnosed 95% blockage of his coronary arteries. Roy's future-and Kirkwood's-would, without surgery, be brief. Roy submitted to a triple bypass operation, and a miracle occurred.

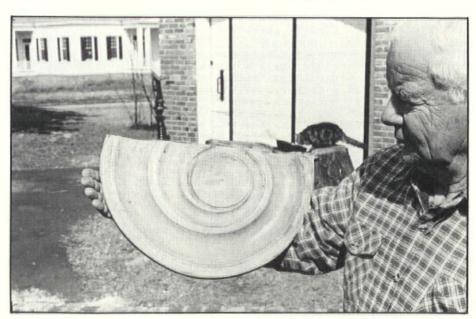
"HE WENT BACK to Kirkwood," says Mary, "like he was shot out of a cannon." A work crew of 12 was assembled; wood chips and plaster dust and pipes and electrical cable fairly flew in and out of Kirkwood's doors and windows. Mary took a long-needed vacation, and Roy was up at dawn, at work with his men, and cooking hot lunches of greens, chowder peas, grits, and baked ham for 12. Lunchtime at Kirkwood became one of the social events of Greene County. "I came home," Mary

says firmly, "and they went back to sandwiches. But Roy had turned into a right good cook." Roy looks pleased at the praise, coming as it does from a culinary artist.

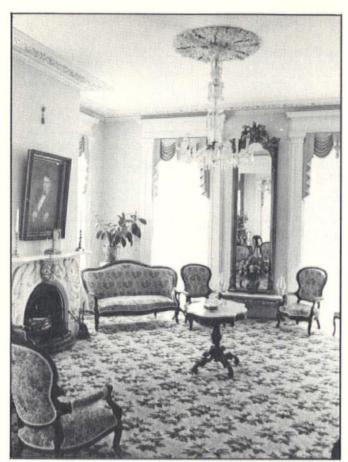
ROY, LOVE, and the crew began scraping paint. The original lead-based paint was white, with green shutters and trim, followed by a Victorian treatment in caramel with dark brown highlights. The brown had bled through subsequent coats of white, and when restoration began, the house looked pink. With torches and chemicals, stripping proceeded. Steamer, the Swayze dog, became ill. In spite of around-the-clock care by the local vet, he died within two weeks of his first symptoms. A cocker spaniel puppy was acquired -- and went the same route. The house kitten became weak and listless. Roy watched her feebly licking her paws as she attempted to groom herself, and an awful suspicion dawned -- which was promptly confirmed. The dogs, the kitten, Love, and Roy had all acquired lead poisoning. No person suffered any long-

term damage, but when Roy says, "Any time you're fooling around with old paint, just consider yourself in danger," his tones are awesome.

WORK CONTINUED with Kirkwood's quota of disasters and near-disasters punctuating the progress. The first grading and pouring of a concrete driveway was a resounding failure. Next morning, Roy ordered in the bulldozers. "If you make a mistake, do not inflict it on



Some of the volutes on Kirkwood's Ionic column capitals had rotted away by the time the Swayzes arrived. Roy Swayze (pictured here) decided to cast replacements for them. He made a mould by taking an intact original wooden volute and casting its impression in paraffin. The mould was then sprayed with a kitchen releasing agent ('PAM'), and Bondo — an auto body patching resin — was poured in. The results matched the originals beautifully.



Left: Kirkwood's front parlor — most of the furniture is original to the room. (The Brussels carpet found there was in threadbare condition and has been stored for possible reproduction.) Foster Kirksey's portrait hangs over the mantel. The mirror, purchased by the Swayzes from a nearby plantation, has an incredibly romantic/tragic story to it. Roy delights in recounting the tale to Kirkwood's guests over an

your house. Take it out and do it again. Immediately." There goes the money for the next project? "Let the next project wait."

THE FINAL MAJOR PROJECT at Kirkwood confronted Roy and Love. "It came time," Roy says--and his pleasure in reviewing this challenge makes little ripples of energy in the Alabama air--"it came time to replace the cupola." Kirkwood's cupola had been removed in the late 19th century because of leaks caused by its faulty construction. Enough of the old components were stored in the attic so that it was possible to determine the original's appearance.

BUT A PROBLEM AROSE from an unexpected source: Swayze neighbors and friends, which by this time comprised all of Eutaw. ("Down here, get serious about doing an old house and, socially speaking, you're in a condition second only to motherhood. You are loved.") No one remembered a cupola on Kirkwood; it seemed a frivolous, if not slightly sacrilegious, addition.

THE SWAYZES calmly persevered. Fourteen months later, Roy and Love completed their massive undertaking--to unanimous approval in the community. "When you put something back the way it was, it's right. You see it, feel it, know it. You can remuddle yourself into bankruptcy, and it'll never be right and you'll be poor, which is not a happy state of affairs."



after-dinner brandy. Right: This mirrored hall tree is one of Kirkwood's many time capsules. It stands where it always stood, its contents intact. Among the artifacts in the drawer are an ivory lady's fan, a silver match safe, a sterling silver parasol handle with Margaretta's monogram, and an 1858 Remington five-shot pocket revolver, complete with bullet mould and powder flask.

ARGARETTA LISTON had attended the nearby Mesopotamia Female Academy and then gone off to New Orleans, to be graduated from the Mile. Desrayeux Finishing School--an institution she loathed as "a virtual nunnery," but which apparently had nurtured her musical abilities. Back home in Alabama, she became the Belle of Eutaw. Mr. Foster Kirksey, newly widowed, first saw her singing in the church choir. "Mr. Kirksey sends his compliments to Miss Liston," reads the card, "and requests the pleasure of her company this evening for a buggy ride." And below, the response: "Miss Liston accepts with pleasure."

AFTER HER MARRIAGE, Margaretta's music remained important to her. At the Female Academy, her friend, Ann B. Hatfield, had composed a piece called "The Mesopotamia Waltz," dedicated to her classmates, and the sheet music today is open upon Margaretta's pianoforte (which was shipped by the bride's father from Boston to Mobile to Eutaw the year Margaretta married). The piece begins brightly, a cascade of optimism in 3/8 time, a mazurka, not a waltz. How can this music sound so wistful, and why is the room permeated with what Mile. Desrayeux would surely name "tristesse"? Kirksey presences are felt with perfect dignity and clarity. Continuity is preserved. The promise of this room, frustrated for generations, has in the last 14 years of effort been fulfilled.

Mounting A Ceiling Medallion; Hanging A Chandelier

PERHAPS you'd like to install a new ceiling medallion to replace one ripped out in a previous remuddling. Or maybe you want to hang a brass chandelier where only a bare bulb now dangles. Not many carpenters or plasterers have experience installing ceiling medallions. And not many electricians can delicately run wire past ornate plaster. So whether you're going to tackle these projects yourself — or hire a pro to do it — you should know the steps involved. Here's how to handle three typical situations.

New Plaster Medallion; Existing Electrical Box

YOU PROBABLY don't need a licensed electrician to hook up the chandelier wires to the electrical box (but check local code). Most codes specify that the face of the box be flush with the medallion. In the drawing, a sleeve extender on the existing electrical box accomplishes this. As plaster is

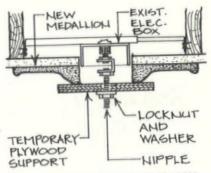
not combustible (foam polymer medallions are), face-mounting the box is not necessary for safety's sake.

To mount the new plaster medallion:

• Center hole in medallion must be larger than a 4-in. round-box. To enlarge hole, drill small holes in the required circle, and cut out with a sabre saw. • Locate and mark ceiling joists. Practice-fit medallion, marking points where it will sit under

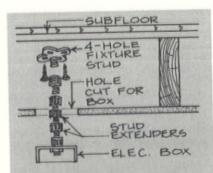
EXIST. JOISTS -EXIST. ELECTRICAL CABLE EXIST. ELECTRICAL EXIST. PLASTER mmmmm mmmmmm COUNTERSUNK SCREW COUNTERGUNK PLASTER TOGGLE MEDALLION STUD CONSTRUCTION EXTENDER ADHESIVE LOCKNUTS SLEEVE EXTENDER (OPTIONAL) MIPPLE -HICKEY (CUT TO LENGTH) CAP NUT AS STANDARD LIGHT FIXTURE CAHOPY

By Clem Labine Illustrations by Jonathan Poore



ONE WAY TO SUPPORT MEDALLION DURING INSTALLATION

joists. • Pre-drill and countersink holes in medallion so screws will hit joists. For extra support for large medallions, also drill for toggle bolts that will hang on ceiling plaster. . If ceiling is painted, sand to provide firm base for glue. (Sand to bare plaster if paint is thick and cracking, or flaking.) . Apply construction adhesive to back of medallion ('Miracle' is one brand). • Use brace suspended from box (see sketch) to hold medallion as screws are being set. Or use T-brace set on floor. Drive screws into joist — snugly, but not so tight that the plaster cracks. . Use acrylic caulk to seal edges of medallion; Spackle screw holes. • Fixtures over 10 lb. must hang from a stud in bottom of box. Hook up as shown at left.

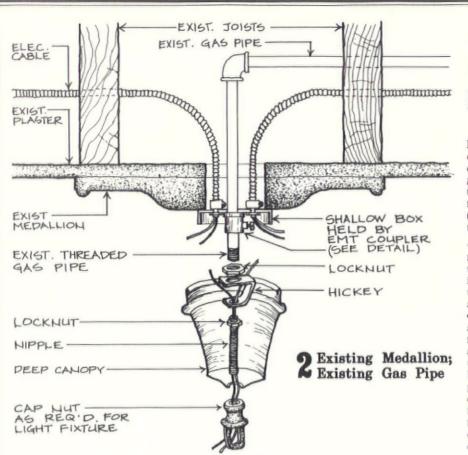


NEW ELECTRICAL BOX IN AN ORNATE PLASTER CEILING

To install a bar hanger and ceiling box as shown in Fig. 3 requires some demolition of ceiling plaster. Here's how to minimize plaster loss when the ceiling has fancy plasterwork or decorative painting:

Cut a 4-in. round hole in the ceiling with a keyhole saw. That's just big enough so that, with a long screwdriver, you can screw a 4-hole fixture stud to the underside of the floor above.
Attach stud extender nipples to fixture stud until you can mount a 4-in. round-box flush with ceiling plaster.

Restoration Design File No. 17



CUT EMT PRILL HOLE
IN GAS PIPE
IN HALF
TO
REDUCE
BUILKINESS

MAKING A COLLAR TO HOLD

MAKING A COLLAR TO HOLD SHALLOW-BOX ON GAS PIPE

HOW DO YOU hang a chandelier when an old gas pipe protrudes through the center of the medallion? You hang the fixture from the gas pipe... but you have to know the trick, because there are no standard fittings for hanging the electrical box. (First, be sure the gas pipe is secure enough to bear the weight.)

· Disconnect gas to the gas pipe (you may need a licensed plumber for this step). . If there's a cap on the end of the pipe, remove it. • Run any required electrical cable to the medallion. If necessary, widen the hole around the gas pipe to pull cable through. • Connect cable to a shallow box (1/2 in. deep) and slide box onto gas pipe. . Hold box firmly against the medallion with a collar adapted from an EMT (electrical metallic tubing) coupler. If hole in medallion is so big that box slides up pipe into the ceiling, provide backing by attaching another EMT collar above the box. . Attach a hickey that fits threads on gas pipe. • Hang fixture from gas pipe as shown. Use a 5-in.-deep canopy to cover box, pipe, and electrical connections.

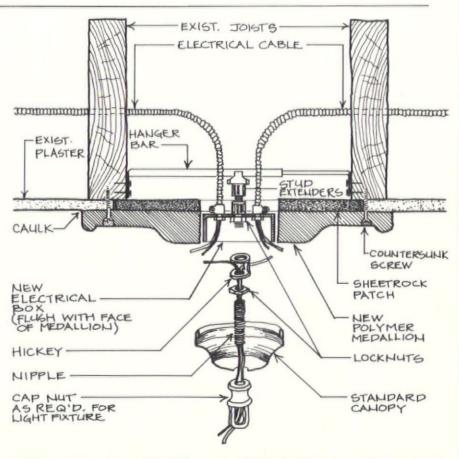
New Polymer Medallion; New Electrical Box

FOAM POLYMER medallions are combustible. So be sure to have the electrical box come out to the face of the medallion. That way, all electrical connections are safely enclosed in metal.

Open ceiling to install hanger bar.
 With stud extender nipples and/or box sleeve, extend 4-in. round-box so it will be level with surface of medallion.
 Connect cables to box; patch ceiling.
 Cut 4-in. diameter hole in center of medallion.
 Tack medallion in place with finish nails or screws driven into joists.
 (Polymer is lighter than plaster; no adhesive is necessary.)
 Spackle screw holes; seal edge of medallion with acrylic caulk.
 Hang chandelier as shown.

THANKS for their expert commentary to: Roland Greenstein — Roy Electric Co., Brooklyn, NY; Susan Graves — Focal Point, Inc., Atlanta, GA; and Joel Westman — Felber, Inc., Ardmore, PA.

> FOR SOURCES OF NEW CEILING MEDALLIONS SEE PAGE 163.



Carpets & Rugs

... Unravelling Their Differences By Joni Monnich

THE DESCRIPTIONS BELOW unravel the mysteries of floor covering from about 1750 until this century. Familiarity with common terms makes it easier to find the right carpet or rug (or at least a facsimile). Also, knowing the vocabulary is a big help when you refer to period decorating books: Next time you read Harriet Beecher Stowe, you'll know just what she means when she recommends an "ingrain" for the parlor.

THE HISTORY OF CARPETING parallels that of wall-paper. Before 1800, carpets were a luxury found mainly in the parlors of the wealthy. Then --with the introduction of mass-production on power looms in the 1830s and '40s -- parlor carpets, especially ingrain and Brussels, became available to the average American household. At that time both straw matting and fine carpeting were generally laid wall-to-wall in the parlor. The Victorian use of area rugs on highly polished wood floors didn't become popular until the early 1870s.

IN MANY CASES, short-cuts in modern machine manufacturing have brought down carpet quality, but the names prevail. Occasionally labels show the difference. We now have "Oriental-types" as well as true Orientals, indicating that these weren't actually woven in the Far East. But more frequently traditional terms are applied to floor coverings that bear little resemblance to their predecessors. For example, "Axminster" now commonly refers to a pile carpet produced on a vertical loom. Axminster no longer has to be 100% wool with cut pile in a 12 ft. width, its original defining characteristics. But by searching with a critical and educated eye, you can find at least one carpeting that'll suit your house, your taste...and your pocketbook!

AUBUSSON CARPET: From the Middle Ages until recently it was produced in a small town (of the same name), near Limoges, France. It's woven on a vertical loom with a thick-thread tapestry weave (without a pile) in large scale, muted color patterns. Until the 19th century, the warp was a combination of flax (linen) and wool, then it became cotton; the weft has always been wool. Now used to refer to any rug with a heavy, coarse tapestry weave -- usually a French floral or scroll design.

AXMINSTER: Originally a mid-19th century worsted English carpet imitating colorful Turkish carpets. Unlike Brussels or Wilton, this sumptuous cut-pile carpeting was woven in one piece (to room-size width) by hand-knotting on a vertical loom. By 1790, most wealthy American households boasted a Scotch, Wilton, or Brussels carpet in the parlor. Yet Axminster, the most expensive of fine carpets, was seldom found this early in America. But by the 1870s, they were machine-woven, still in wide widths without seaming, and readily available. Good-quality

Axminster is still sold, but the term is now applied even to narrow widths in synthetics.

BRAIDED RUG: This ever-popular covering is made of strips of used cloth or remnants. Initially used in frugal households, and upstairs halls and bedrooms, by the mid-19th century it added the popular "hand-crafted" touch to fireplace hearths and plain rooms.

BROADLOOM: Seamless carpeting which is as its name implies woven in broad widths, usually 9-, 12-, 15-, or 18-feet. Readily available today in a variety of weaves, including velvet and Axminster, the quality is determined by the closeness of the tufts and the number of rows per inch. Borders of finer carpeting can be added to a broadloom center to give the look of a more expensive carpet.

BRUSSELS: Still sold today, this long-wearing carpeting -- the pride of many American parlors -- was characterized by a woven, not hand-knotted, uncut worsted loop pile in 27- to 36-inch strips. The weaving process was invented in Brussels, Belgium, in 1710, but the carpeting didn't become popular until 1740 when it was produced in Wilton, England. Comparable to a Wilton, but less costly, the Brussels weaving process allowed for elaborate designs in bold, vibrant colors which became even stronger with the introduction of aniline dyes in 1850 and chemical-base colors after 1869. It was, and still is, sold as borders which could be sewn to a solid color or patterned broadloom rug.

CARPET: Usually "carpet" refers to a soft floor covering which is room size or wall-to-wall, while a "rug" is somewhat smaller.

CRUMBCLOTH: A cloth laid on the floor, usually under the dining room table, to catch crumbs and protect the fine carpet. Most frequently a floorcloth, but references are also made to fabrics such as damask.

DRUGGET: This inexpensive 18th- and 19th-century substitute for carpeting was a coarse woven rug of wool and linen. It was usually produced in solid colors, woven stripes, or checks, and could be used to cover a more expensive carpet. It's not woven today; Dhurries or other coarse-weave carpets could be used as substitutes.

HEARTH OR SCATTER RUG: Small hooked or embroidered rugs usually made of wool and placed in front of the fireplace to protect the finer carpet underneath. By 1900, these were used as well on bare wood or linoleum floors in kitchens and living rooms.

HOOKED RUG: Hooking was a popular craft of the 1840s which enabled even the poorest household to create the effect of a manufactured carpet. Narrow strips of rags or yarn were pulled (continued on page 144)

Carpets & Rugs

What's Available Today!

Knowing the difference between an Axminster and an Aubusson is only the first step in picking a floorcovering. Now comes the hard part: What's still available, and at what price? I can well imagine the confusion of someone trying to buy an appropriate carpet. Even in my research for this article, I became disheartened several times to learn that this or that weave was no longer made, or a traditional process was being employed to turn out only modern designs, or that a lovely carpet was available only to those willing to place a multi-thousand dollar order through a European maker. Also, some manufacturers will sell only to the trade: designers, decorators, architects, professional carpet installers, or fancy decorating stores . . . pick your middleman.

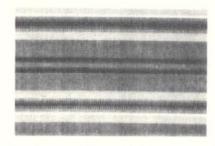
But if you're thinking about buying a historical floor covering for a special room, take heart. Remember that, in the past as now, there were no hard-and-fast rules in room decoration. Then as now, floor covering selection was determined more by practicality and finances — and personal taste has always prevailed over the advice of decorating books. Also, consider that, though expensive, a really gorgeous carpet is the focal point of a room decorated in period style . . . and that's worth saving for. (Your family and guests will just have to learn to take their shoes off outside, that's all.)

Here are some sources for period-style carpeting that I found. See the alphabetical listing at the end of the article for the company's address, etc.

Pileless Carpeting Venetian, Ingrain, Etc.

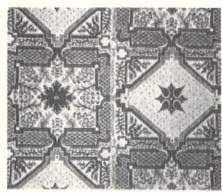
A well respected weaver, author, and consultant on period textiles, Nancy Borden offers handwoven, 100% wool striped carpeting in several period color combinations. Runners, 24 in. wide, are \$69.60 per linear yard. Rug prices begin at \$278 for a 4 x 6, up to \$1442 for a 10 x 12 size.

Traditional, pileless carpets are handwoven by Sunflower Studio. Striped Venetian carpet, 55% worsted wool/45% pure linen, is \$51.75 per yard. 100% worsted ingrain in a selection of small patterns is \$99.75 per yard. Both are custom colored; documented reproductions can be woven. They also weave Jerga, a traditional floor covering from the Spanish Colonial Southwest. Jerga is available in 2 in. brown-and-white check for \$50.50 per yard.



Sunflower's gaily striped Venetian rug

Scalamandre stocks four ingrain patterns. Still produced on Jacquard looms, the carpeting is 36 inches wide, made of 100% wool, and costs \$185 per yard. They also produce striped, 37-inch-wide Venetian carpeting, \$112 per yard, in a mixture of 70% wool/30% cotton.



An intricate ingrain from Scalamandre

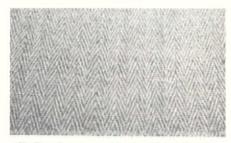
Patterson, Flynn & Martin is one of America's largest importers of Dhurries—coarsely woven 100% wool (or cotton) reversible rugs from India. With a handcrafted look in earth tones, many of their 100 stock patterns, similar to Navajo rugs, would be appropriate in a turn-of-the-century house. A 9 x 12 rug in this style is about \$2,000.



Patterson, Flynn & Martin's Dhurrie

Straw Matting

If you have difficulty finding straw matting in your area, it can be mailordered from Peerless. Two styles are offered, from China or India. The 4×6 mat is \$30; the 9×12 , \$90.



Mail-order straw matting from Peerless

Grass matting for floor covering in two fine weaves is imported by Ernest Treganowan. No. 180 and no. 330 are sold in rolls, 3 ft. x 120 ft., for about \$440. The matting is imported without binding, so you may want to bind the edges to prevent unravelling.

Natural fiber rugs are imported from the Far East by Rosecore. Their selection of several different weaves are made from coir or coco fiber for a dark color, and the aloe plant which yields a light beige color; matting can also be dyed to match your color scheme. Other natural fibers in their selection are maize, rush, and sisal.

(continued on page 145)

Carpets & Rugs (continued from page 142)

through burlap to form a pile. Popular designs ranged from a curled-up cat to Oriental rug motifs. Even when machine-produced carpeting was easily available and affordable, this handcrafted touch remained popular...and still does.

INGRAIN: Also known as Kilmarnock, Kidderminster, or Scotch (for the location of its principal manufacturers) this was by 1840 a common floor covering in most American dining rooms, larger bedrooms, and occasionally parlors. Pileless, loom-woven, all-wool, its double construction featured simple, small patterns in one color on the face and reverse colors on the back. By the 1890s, the availability of pile carpet all but ended the reign of ingrain, although it could still be purchased through the Sears catalog as late as the 1920s. Several companies are currently weaving reproduction patterns.

JACQUARD: loom attachment (usually on a Wilton loom) designed to increase productivity. Wires and an endless belt of perforated cards are keyed to the desired pattern. Adapted to carpet manufacturing in 1825, it's still used by some manufacturers today.

MATTING: Known by a variety of names including Canton or India mats, its use throughout the house has been documented as early as 1750, and by 1820 it was a typical floor covering in every house. Even those who could afford woven carpeting used matting for halls, stairs, and bedrooms. As a summer covering it was tacked down to replace heavy wool carpets, and there are references to it being left in place (under the winter carpet) as an insulator and pad.

NAVAJO RUG: A traditional, coarsely woven rug, popular in the American Southwest. It's characterized by symbolic forms like chervon and diamond motifs. With the increasing popularity of the Arts and Crafts doctrine, this indigenous handicraft and its facsimiles became popular in turn-of-the-century houses all over the country. Today, the old designs are still made, but with commercial yarns and dyes in a sophisticated range of color combinations.

ORIENTAL CARPET: A luxury prior to about 1750, this carpeting was frequently used as a table or furniture covering. Then as now, it was hand-knotted in silk or 100% wool to form a long-wearing loop pile in an infinite variety of designs. Due to inexpensive labor in the Far East, these traditional carpets are still produced by hand.

PILE: The uncut or cut loops of yarn that form the wearing surface of the carpet -- the fibers being upright as opposed to flat.



RAG RUG: Still available, this timeless rug is woven of strips of cotton rags or fabric running from selvage to selvage. Rag rugs were used mostly in upstairs halls and bedrooms.

RUG: A soft floor covering of any size that doesn't cover an entire floor. It's usually finished on all four sides and can be laid on the floor without being fastened.

SAVONNERIE: Carpeting with a deep, textured pile, first produced in France in 1628. Usually baronial in size, it was often better suited to the formal, austere rooms of the country that produced it. Hand-knotted and woven in designs such as bouquets of flowers tied with ribbons or cartouches and scrolls, they were often so rich in soft colors and naturalistic design that one might hesitate to step on them. Originals now bring high prices, but Savonnerie-type rugs can be bought for considerably less.

SAXONY: Luxurious, high-pile, Wilton-type carpeting made from wool, first produced in 1893 in Saxony. Now the term is loosely applied to deep pile carpeting, even when made from synthetic fibers.

STRIP CARPET: Narrow-width rugs used for for halls or stairs, or sewn together for a carpet.

TUFT: Tufts are machine-produced by twisting together fiber strands of yarn to form a pile, cut or uncut. The pile is frequently clipped at different heights to give a sculptured look. Since the 1950s, tufted carpeting has almost overwhelmed the market.

TURKEY-WORK CARPET: In the 18th century,
Americans hand-crafted fabrics that ingeniously
imitated the appearance of expensive Oriental
or "Turkey" carpets. Worsted yarns were pulled
through a coarse, open-textured cloth, then
knotted and cut. By the 1870s, the name loosely described geometric carpet patterns and is
still occasionally used in that reference today.

TWILL: A basic weave in which the weft and warp threads are woven to produce a diagonal pattern; the herringbone is a variation of this.

VENETIAN: An inexpensive, flat-woven (pileless) 27- to 36-inch-wide carpet frequently found in bedrooms, offices, stairs, and passageways. It was usually a gaily colored, striped pattern of worsted warp concealing the weft. Introduced about 1800, it was also produced in check designs, and usually tacked to the floor to prevent it from bunching up. Reproduction patterns and colors are currently being woven.

WILTON: A pile carpet woven in 36-inch-wide strips on a Wilton loom which is controlled by a Jacquard attachment. The loom draws up all yarns of a single color at a time, while the pile and the other colors remain hidden beneath the surface. Originally made of wool with a cut pile, today the term is applied to cut and uncut pile carpets (usually narrow widths) produced in wool or synthetic fibers on a Wilton loom. Then, as now, floral and geometric designs were the most popular, and Wilton borders can be sewn onto broadloom for the effect of a fine carpet without the full cost.

WORSTED: In carpets, worsted yarn is spun from the the longer types of staple (wool), then carded to lay the fibers as nearly parallel as possible, and finally combed to extract the shortest fibers. The result is a strong thread used to produce the most durable (and expensive) carpets.

Wilton & Axminster

Reproducing 100% wool Wilton carpets in Victorian patterns is Langhorne's specialty. In 27-in. widths, these historical reproductions can be made from your antique sample — or you can choose from one of their previously reproduced patterns. The minimum order is 40 sq. yds., and the cost is about \$75-100 per linear yard.

In this country, when it comes to high-quality reproduction textiles, Scalamandre is unmatched. Examples of their finely crafted carpets and rugs can be found in historic houses throughout the country. Wilton carpets (80% wool/20% nylon, or 100% wool) are available in an assortment of patterns, many of which are documented. Produced in 27-in. widths, the cost is about \$85 per linear yard; the minimum order is 30 linear yards.

Another company actively involved in the restoration field is Stark. Their Wilton carpet is usually produced in 100% wool and widths of 27 in., 28 in., 39 in., or 12 ft. for \$60 (and up) per yard. Their Axminster carpet in 80% wool/20% nylon is about \$50 per yard, in 27-in., 36-in., 9-ft., or 12-ft. widths. Both are offered in an almost endless variety of patterns. Borders, which can be attached to a solid color or patterned carpet, are sold in 6¾-in., 9-in., or 13-in. widths. Narrow-width Wiltons can also be used as a wide border.



"Carnation White" is produced by Stark on Axminster or Wilton looms.

American-made Axminster (80% wool /20% nylon) and all-wool Wilton carpets are available from Rosecore. Although largely a collection of modern designs, some of their patterns could be used as substitutes for a period carpet. Both carpet types are sold in 27-in. widths with companion borders. Reproductions of old patterns can also be produced.

27-in. wide Wilton and 12-ft. wide Axminster are sold by Patterson, Flynn & Martin. They are about \$80 per linear yard; minimum order is 30 linear yards. The manufacturer is willing to cut either type down to form 6- to 9-in. borders.

OHJ subscriber Clark Marlor, a neighbor here in Brooklyn, recently told us about his carpet-buying experience. He was looking for a fine carpet for his formal 1897 Victorian row-house. Initially discouraged by the endless array of nylon imitations, he was thrilled to find

100% wool Axminster in a designer's showroom in New York City. Its patterns and material were historically appropriate, but it was terribly expensive and available only through designers or installers. So, while on holiday in England, he contacted a major department store regarding their shipping directly to him. The result: He has that beautiful carpet at a saving of several hundred dollars.

Produced by Goodacre, the Royal Kendall Collection consists of six Oriental geometrics, small and large florals, and leaf patterns - all sold in 12 ft. widths through U.S. and English distributors. Sample numbers are the same in both countries. Therefore you can order directly from an English distributor, as did Mr. Marlor! He chose a muted floral pattern; the cost for 80 yds., including air freight, was about \$3,825 U.S. (There was also an installation charge of \$1250, and a trucking charge for delivering the 350-lb. roll, but the English V.A.T. sales tax - was dropped.) When asked if he would do it again, Mr. Marlor said he was pleased with the product, but he was glad it would last a lifetime!

You can place an order for Axminster carpet, without going to England, through Selfridges, Carpet Dept., Oxford St., London, England W1A 1AB. Or find a U.S. distributor by writing to Goodacre Carpets Ltd., Castlemills, Kendall Cumbria, England LA9 7DF. (0539) 23601. Ask for the export office mana-

ger, H. Hewlett.

Braided, Hooked, Or Rag

Most large craft stores carry instruction books and kits to hook or braid your own rug. But you can also mailorder these products from Braid-Aid. Their wide selection of period and traditional designs includes all the accessories, materials, and patterns you will need to braid, hook, or weave a rug.

Looking for a woven rug large enough to use wall-to-wall? Saxony makes 100% cotton, multi-striped rugs in widths of 1 to 12 ft., and up to any length. Stock patterns from their choice of thirteen color combinations are \$16/sq.ft.; custom colors are \$21.35/sq.ft.

Rag rugs and carpets can be mailordered from Rastetter, a family company of fifth-generation weavers. They are hand-woven in your choice of 100% wool, 100% cotton, or cotton/rayon yarn; 27-in. and 36-in. widths. Prices begin at \$9/yard for a 27-in. wide remnant rug; \$23/yard buys a 36-in.-wide, 75% rayon/25% cotton combination. Braided rugs can be made to your specifications for \$130/sq. yard.

Orientals

Orientals are more popular than ever—and thus there are many dealers. I'm pleased to share a reputable, conscientious, and friendly source. Charles Jacobsen stocks 3,000 or more Oriental rugs: new, used, semi-antique, and antique. They're direct importers, so costs are kept relatively low. An average 8 x 10 rug ranges from \$400 (for a used rug) to \$3,000. The more you spend, the larger your selection of patterns.

Because of inexpensive labor, traditional Oriental patterns are being handmade in India today for lower cost. For example, an 8 x 10 Kashan from Iran costs \$5,000-6,000, while a similar, tightly woven Indian Kashan is only \$2,300.

With this company, it's best to phone or write describing your needs. Their knowledgeable staff will then send you color slides, and your choice is shipped on approval. (They pay shipping.) Readers about to purchase an Oriental rug will want to order Mr. Jacobsen's book, Oriental Rugs, An Updated Guide. Mr. Jacobsen is president of the company and a recognized authority in the field. His \$8 (ppd.) guide helps you to under-

stand the enormous variety of Orientals in today's market.

Oriental 100% wool rugs can be mailordered from Peerless. Their large selection of Orientals includes 2×3 rugs (\$200), all the way up to a 10×14 rug (\$4,600).



From the "Kashimar Collection" by Couristan — Antique Saraband

The Kashimar collection is a selection of Oriental-style rugs imported from Belgium by Couristan. Made of 100% worsted wool woven on Wilton looms, they come in a vast choice of colors, styles, and sizes. An average price for an 8 x 11 rug is \$829.

(continued on next page)

Brussels & Savonnerie

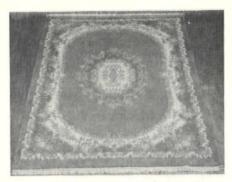
Loop pile, 27-in.-wide Brussels carpeting is produced by Colefax and Fowler in England. The collection of twenty-two designs, many with coordinating borders, was adapted from 18th- and 19th-century patterns found in English country houses. The cost is about \$60 per sq.yd.; there's a surcharge for orders under 42 linear yards.



"Medallion" by Colefax & Fowler

All-wool Savonnerie-type rugs can be mail-ordered from Peerless Rugs. These are available in five colorways, ranging from \$61 for a 2 x 4 rug, up to \$2,700 for a 12 x 18 rug.

Charles Jacobsen imports several 'French Savonnerie' patterns from India. A roomsize rug, handwoven in soft pastels, is about \$1050.



Jacobsen's imported Savonnerie

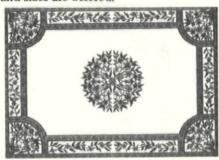
Documented reproductions and adaptations of period Brussels carpets are manufactured by Scalamandre. Made of 100% wool in 27-in. widths, they are about \$85 per linear yard; minimum order, 30 linear yards.



Scalamandre's reproduction of an early 19th-century English Brussels pattern.

In what might be considered a 20th-century adaptation of French Savonnerie carpeting, Victorian Collectibles offers four naturalistic rug patterns in deep pile, 100% wool. Hand-woven and sculptured, the designs come from The Brillion Collection — unused, late-19th-& early-20th-century wallpapers that were discovered in an abandoned drugstore.

Nouveau Fleur and Poppy are both reminiscent of Art Nouveau design; Frosted Lily is adapted from a late 1800s Eastlake design; the fourth pattern is called Grapevine. A 6 x 9 rug is \$2,500, the 9 x 12 rug is \$5,000; custom colors and sizes are offered.



Victorian Collectibles adapted the "Frosted Lily" pattern from a late 1800s Eastlake-style wallpaper.

It's not in everyone's budget of course, but authentic tapestry-like Aubusson (\$5-6,000 per yard) and Savonnerie (\$750 per yard) carpeting IS still available through Patterson, Flynn & Martin.

Source Information Addresses, Etc.

Nancy Borden, 187 Marcy St., Dept. OHJ, Portsmouth, NH 03801. (603) 436-4284. Polaroid pictures of one striped carpeting color combination or a floorcloth in a room setting are \$1.25 each. An informative brochure is \$1.

Braid-Aid, 466 Washington St., Dept. OHJ, Pembroke, MA 02359. (617) 826-6091. Mail-order catalog, \$2.

Colefax and Fowler, 39 Brook St., Dept. OHJ, London, England W1Y 1AU. 011-441-493-2231. Free color brochure. Six of their patterns are sold through Stark, but you can also order direct.

Couristan, Inc., 919 Third Ave., Dept. OHJ, New York, NY 10022. (212) 371-4200. Sold through nationwide distributors, their complete collection is featured in a 60-page color catalog, \$5 ppd.

Charles W. Jacobsen, Inc., 401 S. Salina St., Dept. OHJ, Syracuse, NY 13202. (315) 471-6522. Free and helpful literature. Carpeting is sold direct.

Langhorne Carpet Co., PO Box 175, Dept. OHJ, Penndel, PA 19047. (215) 757-5155. No literature, but you can contact them for further details and a dealer in your area.

Patterson, Flynn & Martin, Inc., 950 Third Ave., Dept. OHJ, New York, NY 10022. (212) 751-6414. Free brochures. Floor coverings are only sold direct to the trade.

Peerless Imported Rugs, 3028 N. Lincoln Ave., Dept. OHJ, Chicago, IL 60657. (800) 621-6573. Color catalog, \$1, features their line of mail-order rugs.

Rastetter Woolen Mill, Star Rts. 62 & 39 E., Dept. OHJ, Millersburg, OH 44654. (216) 674-2103. A brochure illustrating various weaves and rugs is \$1.

Rosecore Carpet Co., Inc., 979 Third Ave., Dept. OHJ, New York, NY 10022. (212) 421-7272. Free brochures. Products are sold through the trade.

Saxony Carpet, 979 Third Ave., Dept. OHJ, New York, NY 10022. (212) 755-7100. They don't offer any literature, but their products can be seen through decorators and architects nationwide.

Scalamandre, Inc., 950 Third Ave., Dept. OHJ, New York, NY 10022. (212) 980-3888. Their "19th-Century Carpet Collection" brochure is free. Carpeting is sold through the trade and several large decorating centers.

Stark Carpet Corp., 979 Third Ave., Dept. OHJ, New York, NY 10022. (212) 752-9000. Free information. Sold through decorators and architects.

Sunflower Studio, 2851 Road B-1/2, Dept. OHJ, Grand Junction, CO 81503. (303) 242-3883. Their handwoven carpets and other fabrics can be seen in a mail-order catalog, \$2.50.

Ernest Treganowan, Inc., 306 E. 61st St., Dept. OHJ, New York, NY 10021. (212) 755-1050. They'll be happy to sell direct and send free information and samples.

Victorian Collectibles, Ltd. 6916 N. Santa Monica Blvd., Dept. OHJ, Fox Point, WI 53217. (414) 352-6910. Free literature on the carpeting. Color slides and a small sample of carpet are also available. A binder with color photos of their carpeting, as well as painted ceiling and dado canvases, is \$50.

BUILDING A NEW STOOP

Lessons In Craftsmanship & Weathering By Larry Jones

WHAT HAPPENS when an interior carpenter agrees to take on an exterior job: the rebuilding of a wood stoop? In this case, he chose a few less-than-perfect details, and theoretical problems became all too real in an astonishingly short time. Because this carpenter (and the owners of the stoop) have offered to share their project, we have a unique opportunity to present helpful, specific advice on the principles of exterior wood construction.

LET ME SET THE STAGE. The new stoop leads to a house that isn't far into its restoration. A recent purchase, it's a house with "potential" in an up-and-coming neighborhood. (Sound familiar?) The asphalt siding is still there; the owners had to replace the stoop primarily for safety's sake. They wanted the job done sensitively. In a neighborhood of wood-frame row houses, a model stoop had to be made of wood, and made to closely resemble the original.

BUT FINDING an exterior carpenter in brownstone Brooklyn wasn't easy. Wood stoops went out with the Depression, to be replaced by tacky renditions in concrete block, phoney brick, and countless other trendy materials. So the Mahons decided to design their own (after studying the few remaining wood stoops). They employed Stan

Watt, an interior restoration carpenter who was willing to take on the job as a learning experience. Many of his decisions were sound. But after ten months of weathering, it is apparent that some of the detailing hasn't held up to the moisture and hard weather.

FOR EACH PART of the stoop, we will critically examine the construction decisions, the designs, and some of the problems encountered. Then we'll discuss techniques for exterior wood construction.

THERE ARE LESSONS HERE that can be applied to decks, porches, fences ... almost any exterior wood project that has to shed water.

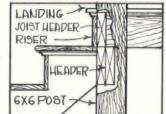
PROBLEMS

FOUNDATION: The stoop is supported by newels set in concrete with continuous

footings poured in concrete and designed to keep water out of the stoop. It extends as a curb about 6 in. above grade. Flashing extends over the curb and down the face to turn under the base trim. Flashing most likely will not protect the adjacent wood from moisture damage and may hinder much needed venting between wood and the concrete foundation.

THE STRUCTURAL FRAMING: The carriages, newel posts, rear posts, sills, and studs

are all of Wolmanized lumber, outdoor grade wood, pressure treated with preservative. The stair carriage system consists of a cut center carriage, two rough stringers, and two finish stringers. The tops of the carriage and stringers are supported



by a header and vertical posts. The stoop landing is constructed above the header, which supports the carriage and stringers. (See drawing above.)

LANDING: Here's where the real problems begin to occur. The landing at the top of the stoop is composed of 3-by-3/4-inch, tongue-and-groove, yellow pine flooring, laid parallel to the front of the house. Edge boards cover the end grain on the sides. This deck is laid over two layers

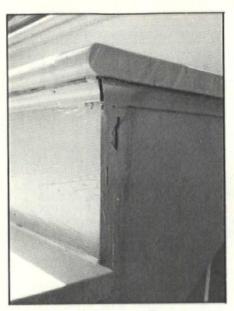
deck is laid over two layers of heavy plastic, on a sub-floor of 3/4-inch marine plywood. The waterproof membrane and subfloor, intended to protect the landing from water, are having the opposite effect.

FLOORBOARDS on the landing swelled and buckled twice last winter and are doing so again. There are two causes: a lack of ventilation under the stoop, and the use of a subfloor that traps water. The problem is made worse because the floorboards were laid perpendicular to the slope of the landing. Rainwater, as it drains downslope on the landing, is actually channeled into the crevices between boards.

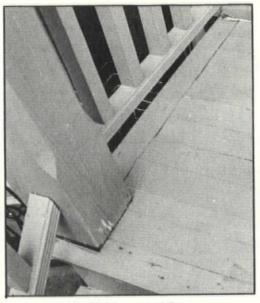
SPANDRELS: Enclosed sides of the stoop (spandrels) are made of V-groove pine panels installed between the rough and finish



From a distance the Mahons' new stoop looks good. But upon closer examination we will see just how much weather damage an improperly constructed wood stoop can suffer in only ten months.



Water has caused riser to curl out at top,exerting upward force on moulding and tread above. Paint has failed over sealant.



Floorboard buckled because subfloor traps water. Countersunk screws, an attempt to hold boards down, will result in little areas of countersunk rot.

SPANDREL

BASE BOARD

FOUNDATION

CONC.

SILL FLASHING



Flat horizontal surfaces, like this baseboard top, can hold moisture. Note how sealant has pulled loose.

stringers. The panels, running vertically, come down to cover the foundation. A treated 2-by-8, cut to compensate for the slope of the

ground, forms the baseboard along the bottom of each spandrel. The flat tops of these trim boards tend to collect moisture which will loosen sealed joints, result in paint failure, and cause end-grain checking even in treated

wood. Untreated lumber such as the spandrel boards are especially vulnerable to moisture.

THE ENTIRE baseboard/spandrel assembly, although it admirably covers the concrete foundation, is too close to the ground. Splashing water and soil can be expected to cause problems in this area even though the stoop is surrounded by concrete.

STEPS (TREADS AND RISERS): Ready-made yellow pine stair treads were used, one inch thick with rounded front nosings. The Mahons specified an 114-in. run and an 8-in. rise after inspecting several similar stoops. It's a little steep -- a 7- to 7½-in. rise is considered optimum, but stoops in Brooklyn are traditionally steep, as there is very little front area-way -- the rise has to be completed over a very short run. Risers are 3/4-in. stock; butt joints are used throughout. No return nosings were used.

TREAD SLOPE is 3/8 to 1/2 in. to the foot, more than adequate to facilitate drainage. Treads and risers were face-nailed into the carriage and stringers. A mitred cove moulding was installed beneath the step nosings. A paintable silicone sealant was used both to seal and fill all joints and checks. Treads and risers were primed and painted in place.

THE TREADS are already cupping up from the nosing, causing ponding on the steps despite the original pitch of the treads. Moisture in the

wood -- from inadequate ventilation below the stoop as well as from ponding -- has caused almost all joints to come apart. The risers, too, are cupping, forcing the cove moulding off and exerting upward force on the tread above. Gross movement in joints, again due to expansion from water, has caused the silicone sealant to pull away, and has broken the paint film.

HANDRAIL: The handrail and bottom rail of the balustrade are lumberyard stock. The entire assembly is somewhat flexible due to the toe-nailing of the balusters to the rails, as well as to inadequate support under the low-er rails. There are no supports under the entire 9-ft. run of the stair rail; gravity alone will soon start the balustrade sagging which will loosen up all of the joints.

SOLUTIONS

HERE ARE THREE basic points that help set the stage for understanding good exterior • Build it like a ship. The structure must

shed water; it must be water repellent but not necessarily waterproof. Appropriate materials, joints, and finishes must be chosen.

 Ventilation is the biggest omission on this stoop, and is commonly overlooked. The underside of wood exposed to weather should be able to breathe. Seldom is there too much ventilation.

· Maintenance is a requirement for any outdoor wood structure, especially stoops. Recurring problems may require modifications to the design

THE FOLLOWING GUIDELINES are intended to help you avoid some of the annoying and persistent problems which Stan encountered on his stoop project.

LANDING: The heart of the problem. The flooring should have been tongue-and-groove, 1-in. fir laid directly over an adequate number of joists. Soak in wood preservative, backprime, and assemble the boards with caulking; make certain that the boards run with the



Tread has split allowing moisture into the carriage. Sealant has failed to seal the joint between newel and tread. Concrete against the baseboard will result in eventual deterioration.

slope. Cover end-grain of flooring with nosing for moisture protection. It's best to use power nailed cleats to anchor flooring. Paint the floor with two coats of oil-based porch and deck enamel (non-slip variety). Avoid the new rubberized coatings -- they're hard to remove. Plan on some shrinkage and opening up of the joints within a year of completion which will require minor filling and repainting.

FOUNDATION: Wooden posts last longer (and are more easily replaced) if mounted on metal post anchors set into concrete.

if mounted on metal post anchors set into concrete.

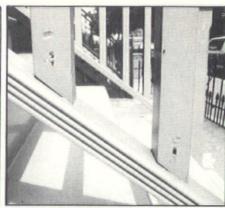
HANDRAILS AND NEWELS:
The balustrade should be rigid and simple

with sloping surfaces to drain water. Support the bottom rail a minimum of every four feet to reduce sagging. Use tightly caulked joints throughout. Nailing balusters to rails is the weakest method of attachment; tenons, screws, or dowels are better. The newel post cap should be one-piece construction, designed to shed water. (See drawing on the next page.)

STEPS & RISERS: Ready-made, 1-in.-thick fir tread stands up to weather and foot traffic better than 3/4-in. stock. Fir is favored for its dense grain and hardness. Yellow pine (used here) and redwood are softer and tend to wear poorly underfoot. There are two basic types of joints for riser and tread. The butt joint (used on this project) allows easy replacement of tread and riser, but offers little resistance to cupping of either the tread or riser. The combination dado/rabbet joint seems to offer the greatest resistance to movement in either the tread or riser. Rout a rounded drip edge into the underside of the tread nosing to help water drip free of the riser below. All treads, risers, and trim should be pre-treated with preservative, back-primed, and caulked to seal out moisture. Return nosings are omitted since they do not move well with the tread.



Sealant has failed to stay in cracks on post, forcing paint to peel.



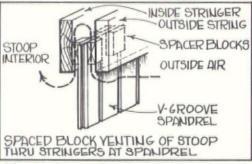
Rails should have sloping tops to shed water. Open joints and nail holes are prime areas for moisture-related decay.





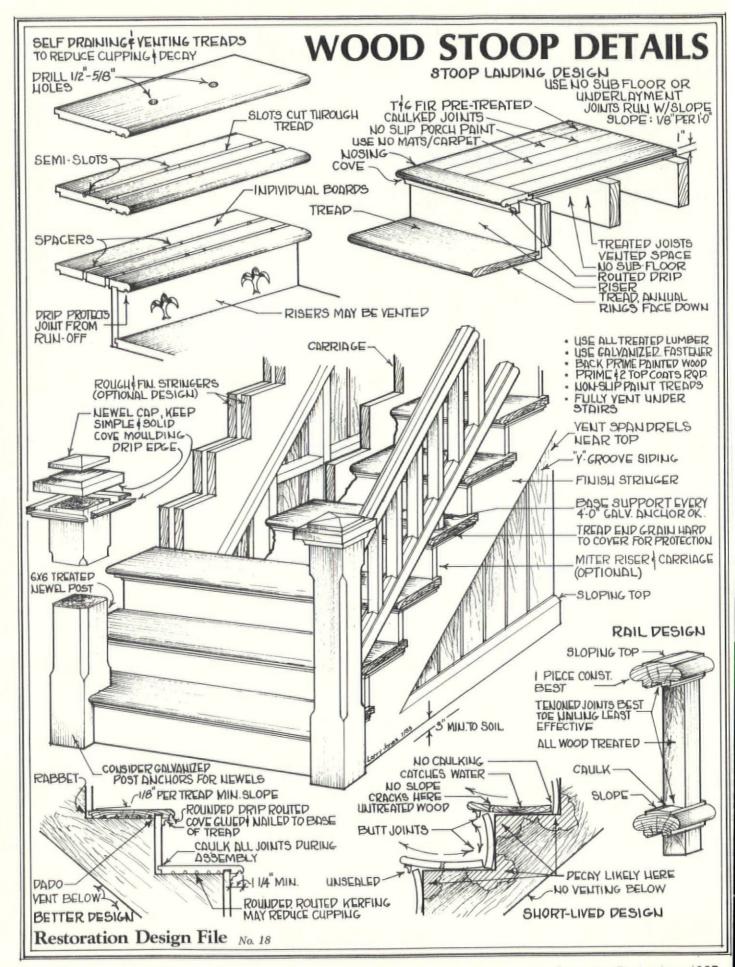
Views of other stoops: Right — The end result of long exposure to water; decay begins at joints and end-grain. Left — Here a non-treated post deteriorates from constant contact with soil and water.

SPANDRELS: For the spandrel boards and trim, use only treated and back-primed lumber. A three-inch ground clearance is recommended



to avoid wetting and paint failure problems from rain. Baseboards and other trim should be designed to shed water. Painted surfaces will last longest if all exposed joints are caulked. For the design of this stoop, venting is mandatory in the area of the foundation. Louver vents installed through the spandrel face would work; better yet, allow air to circulate through the stringers as shown above. The venting is unnoticeable and not easily damaged.

STAN WATT, the carpenter on this project, is to be commended not only for his effort to relearn the almost forgotten art of stoop building, but also for his dogged determination to keep redoing the stoop until it works. We'd like to thank him and the Mahons for sharing this project while it was still in progress.



Restorer's Notebook



Whitewashing



WE HAVE SOME OUTBUILDINGS and fences on our farm which we recently whitewashed. Whitewash is simple and easy to make. You begin with "well-slaked," or thoroughly water-soaked lime. dissolve 21/2 pounds of alum (which is aluminum sulfate) in boiling water and add that to each pail of lime as a binder. Apply this mixture very thinly with a coarse whitewash brush. It will be less transparent when it dries. Two coats seem to work best. Even though whitewash doesn't last as long as paint, my husband and I prefer it because it gives a softer, more antique appearance.

> Eliza L. Armstrong Williamstown, Mass.

Dry Clean Your Windows

MY FATHER found an easy way to "wash" windows which is especially useful on the outside. Just rub the window with a dry 0000 (4 ought) steel wool pad and brush off the residue that falls on the muntin with a dry paint brush. The fine steel wool removes weather spots, does not streak, and involves very little mess.

> Ann G. Blatzer Lynchburg, Va.

Soak Up More

A NATURAL SPONGE is far more absorbent than a synthetic cellulose sponge. Natural sponges are more expensive, but their superior performance makes them worth it.

> Sara Crane Ann Arbor, Mich.

Help In Hammering

AFTER COUNTLESS MISHAPS with nailing things, I've come up with a few tips. To avoid banged fingers when starting a small nail in wood, stick the nail in a small piece of putty or modeling clay. The putty will hold the nail upright as you hit the first blows and your fingers will be at a safe distance.

NAILS OFTEN GET BENT when they're hammered into tough wood. If you lubricate the nail before you start hammering, you may be able to avoid this. I drilled a 4-in. hole into the wooden outt of my hammer and filled it with beeswax so hat I would have a convenient way to lubricate the nails. Soap or paraffin can also be used s a lubricant.

TO KEEP PLASTER from cracking while driving a nail in, just put a piece of masking tape over the spot and drive the nail through it.

> Christopher Owens Spokane, Wash.

Cleaning Copper And Brass

AMMONIA is an inexpensive household substitute for copper and brass cleaner. You can scrub tarnish off with very fine steel wool if the piece isn't plated or lacquered. Plated pieces should be cleaned with ammonia and a soft cloth rather than with steel wool. Lacquered pieces can be cleaned with liquid household detergent.

> Theodore Evans Annapolis, Maryland

Tidying Marble



THE MARBLE MANTEL in my 1860s rowhouse was decidedly dingy. I knew I could clean it with a commercial marble poultice (OHJ, Oct. 1982), but none was available locally. So I used a trick I learned years ago from an old marble worker--and it worked fine. If you'd like to try it, here's what to do:

GET A BOX of Tide powdered laundry detergent. Add enough water to bring it to the consistency of very thick pancake batter. (Never add the powder to water; you'll get a foamy mess!)
Then spread the poultice liberally over the mantel, building up as thick a coat as possible
The poultice should be about '4" thick on the horizontal shelf. Then cover the entire mantel with plastic sheeting taped to the wall and floors. (I use plastic garbage bags taped to-gether.) The plastic keeps the poultice from drying out.

LET THE POULTICE SOAK for three days, then remove the plastic and allow the poultice to start drying. When it is still a little moist, scrape it off with a Teflon spatula or a plastic windshield scraper. (If you allow the poultice to dry rock hard, it becomes VERY difficult to get off.) Any Tide residue can be rinsed off with clean water and a coft with rinsed off with clean water and a soft cloth. One application of the Tide poultice was all I needed. Very dirty marble might need a second treatment.

> Nat Hendricks Brooklyn, N.Y.

Tips To Share? Do you have any hints or short cuts that might help other old-house owners? We'll pay \$15 for any short how-to items that are used in this "Restorer's Notebook" column. Write to Notebook Editor, The Old-House Journal, 69A Seventh Avenue, Brooklyn, NY 11217.



Laying Out All-Over Patterns On Walls

By Clem Labine

N THE JULY ISSUE, we looked at ways to lay out stencilled borders. This month, we'll sketch out a more elaborate project: decorating entire walls in the late Victorian manner. Why would anyone consider such a major undertaking, since there are some fine reproduction Victorian wallpapers on the market? The answer lies in stencilling's flexibility. With a few dollars' worth of paint--and a lot of time and imagination--you can re-create ANY historic interior you've seen in a book or museum. Or, you can create your own variation on historic motifs.

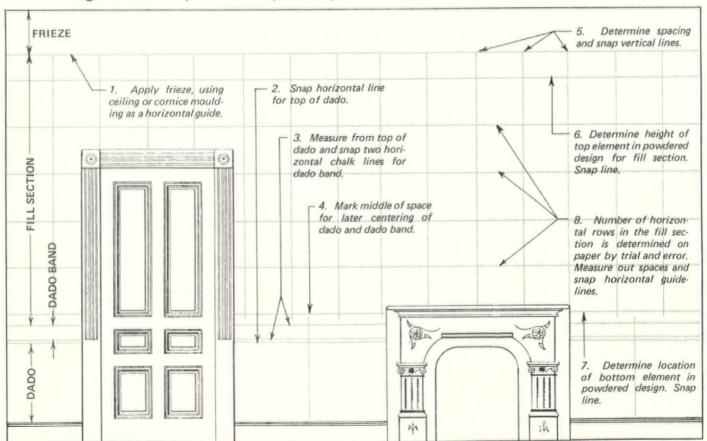
WHEN DESIGNING a complex wall layout, start by making a scale drawing of all four walls, showing protruding elements such as doors, windows, mantels, and radiators. A drafting board and T-square are helpful here, although you can get by with ruler and graph paper. Then make several copies of each wall drawing. This enables you to experiment freely, without endless erasing.

THEN SELECT your stencil patterns.* Next, make scale drawings of your stencil designs and Xerox them. Better still, if you have access to a reducing Xerox machine, you can have the actual patterns reduced to the appropriate size. Then, on the scale drawings, experiment to find the best way to fit the stencil patterns to the peculiarities of your walls.

THE WALL BELOW presents a typically awkward layout problem. The wall is not a continuous surface, but rather is broken up by a door and a mantel. This complicates the fitting of the dado and powdered fill pattern. (A "powdered" pattern is a series of unconnected elements spaced evenly over a surface.) After the positioning of the stencilled elements has been worked out on paper, here's how the layout would be transferred to the wall:

*In this example, all four patterns came from "Authentic Victorian Stencil Patterns," edited by Carol Belanger Grafton. ISBN 0-486-24337-0. \$4.25 ppd. from Dover Publications, 31 E. 2nd St., Mineola, NY 11501.

After Design Is Developed On Paper, Layout Grid Is Transferred To Wall



The two-color frieze is applied to the wall first. (See OHJ, July 1983.) The bottom of the cornice moulding can be used as the horizontal guide. Cut the stencil so that when it is pushed up against the moulding, the pattern is in the right position. If the moulding is too irregular, you'll have to snap a horizontal chalk line to use as a guide.

For a reference point to start from, measure up from the floor to the top of the dado. Then from the reference mark, use a long mason's level and mark out a light horizontal guideline in pencil. Alternately, use a chalk line with a line level. (If the wall color is very light, use powdered charcoal on the snap line instead of chalk dust.) For the most precise results, use a water level.

DON'T USE repeated measurements from the floor or baseboard to establish a horizontal line. Most floors slope, and this will produce an out-of-level line that will be quite jarring.

When the top of the dado is laid out, measure up the correct distance and snap chalk lines for the top and bottom of the dado band.

Measure the midpoints of each section of dado (e.g., between door and mantel). This enables you to space the pattern evenly in each section.

Determine position of each vertical row of powdered elements. In the example, verticals were centered on repeating elements in the frieze. This was arbitrary, however. The verticals could just as easily have been laid out in relation to the door or mantel. One benefit of a powdered pattern is that it's extremely flexible.

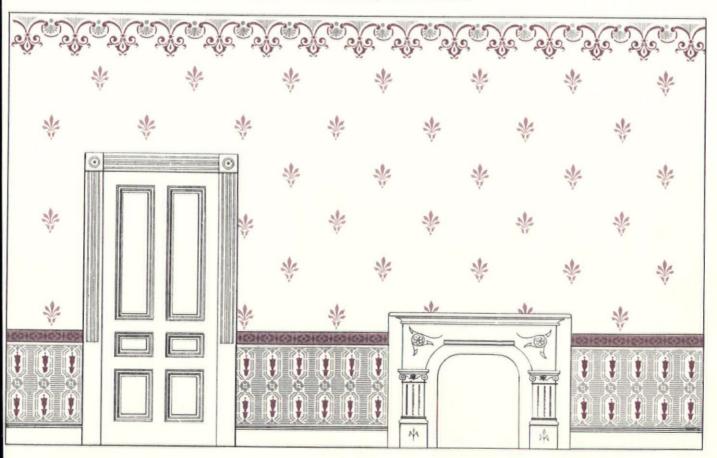
Determine the height of the topmost element in the powdered pattern from the scale drawing. Snap a horizontal chalk line using any of the methods outlined in step 2.

Determine height of lowest element in the powdered pattern in relation to the dado band. Snap a horizontal chalk line. To double-check your work, measure between the top and bottom horizontals at both ends of the wall.

The total number of horizontal rows in the powdered pattern were determined by trial-and-error on the scale drawing. Measure out appropriate spaces, and snap horizontal guidelines.

THE STENCILLED WALLS and ceilings of the late 19th century are breath-taking in their beauty and complexity. If you have some talent and patience, there's no reason why you can't create the same designs as those old-world decorators.

Result: A Traditional Late Victorian Dado, Fill, And Frieze





THE ENGLISH claim to have beautified New York with the planting of street trees. By 1750, New York's streets, as well as those of many New England towns and villages, were shaded by Basswood, Black Locust, American Elm, American Sycamore, and Sugar Maple. All these native trees created uniquely American settings.

By Dan Maciejak

An expert tells us how to pick the best street trees for old neighborhoods . . . and how to keep them alive through the critical first year.

BE CAREFUL not to plant trees under wires or near a lamppost. All intense overhead night lighting is bad because the light will encourage plantings to continue growing. Growth could be started too early or extended into cold periods, killing off emergent flowers and leaves. Also, trees growing under obstructions will eventually need radical, some-

times disfiguring pruning to prevent both tree damage and costly repairs to utilities. One other consideration: Wherever possible, plant the tree so that the trunk stands 2½ to 3 ft. away from the curb, to protect it from injury by vehicles.

SELECT A SITE free from underground electric, gas, sewer, or water lines. These are often amazingly porous. Most trees, even those with shallow root systems, will find their way into water and sewage lines and clog them. Gas lines near or under tree roots can be cracked as roots shift in response to canopy wind pressure. You can discover utility locations by inspecting their entry points in your cellar wall and tracing them straight back toward the street. Avoid thy neighbors' utilities.

UNFORTUNATELY, these trees haven't adapted well to the twentieth century. American Elm and American Sycamore are no longer planted, due to their susceptibility to disease. Basswood and Sugar Maple are relatively slow growers, and the latter is thought to be sensitive to air pollution. Both are accused of lifting sidewalks with their strong lateral root development. Black Locust becomes brittle with age, and its foliage is often discolored in midseason by leaf-mining insects.

DISEASE, acid rain, and insect pests are real problems, but they haven't deterred us from planting street trees. The demand has never been greater, and naturally enough, the nursery industry has expanded to meet this new market. Experimentation and competition has brought about the availability of numerous new cultivars and hybrids of varying traits (many patented); some very good, others soon forgotten.

A STREET-TREE BUYER has plenty of choices, but many new trees are inappropriate to an old-house setting. The chart on page 155 should help you select the tree that's right for your period house. Whatever tree you choose won't be without risk. No one has produced a maintenance-free tree, and no one can predict with certainty the advent or destructiveness of plant plague. But reading this article will give you a fighting chance, regardless of the kind of tree you plant.

Primary Considerations

You SHOULD BEGIN by realistically assessing the level of care you can offer the new planting for the first few years. Is there a hose bib nearby so you can water it? If you go away for a dry summer, can you get your block association or someone you know to look after the tree?

The Tree Pit

ARK OUT the perimeter of the tree pit.

A pit 8 by 8 ft. is ideal, but 5 by 5 ft.

will do if it must. Lift or break out a
small piece of pavement. Dig a test pit to the
anticipated depth of the hole (about 30 in.).

Scoop out some of the soil at the bottom. If
it's soggy, sticky, and foul-smelling, you'd
better abandon the hole-maybe the whole project. These are indications of industrial toxins, oil spills, natural gas leaks, etc., that
have made the soil unsuitable for planting.

This may not happen very often, but when it
does, it can make all the difference. (It may
be the reason you have no trees on your block.)

IF THE SUBSOIL is cool, damp, light in texture, and smells as good as ordinary garden soil, you're almost there. But before you select a tree, test the soil's level of acidity. Take a soil sample to a large nursery or grower, or to your state agricultural extension service. When they say okay, it's time for the tree.

Hardy Street Trees For Old Neighborhoods

Common Name	Latin Name	Growth Rate	Shape & Character	Potential Height (ft.)	Origin & Introduction	Pests & Problems
Callery Pear	Pyrus calleryana	moderate	pyramidal, formal	35	from China, introduced 1918 by F.N. Meyer	spring planting only; small susceptibility to fire blight
Honey Locust	Gleditsia triacanthos	fast	irregular, rugged, flat topped	45	native; ornamental use after 1930s	Spidermite, nectria canker
Sugar Maple	Acer saccharum	slow	oval, irregular to regular	60	native; in use since colonial period	Gypsy moth and scale insects
London Plane Tree	Platanus acerifolia	fast	coarse, irregular, pyramidal	45	developed prior to 1700, P. occidentalis (x) P. orientalis	highly susceptible to anthracnose
Ginkgo	Ginkgo bilboa	moderate	highly irregular, picturesque	50	from China; introduced 1780s	air pollution; females produce foul-smelling fruits
Lombardy Poplar	Populus nigra 'italica'	fast	fastigiate, vigorously upright	50	originated 1750; introduced 1780s	Prone to canker topping off old trees, storm damage
Red Oak	Quercus borealis	moderate	pyramidal to round topped	65	native; in use since 1800	Gypsy moth, oak blight in Midwest

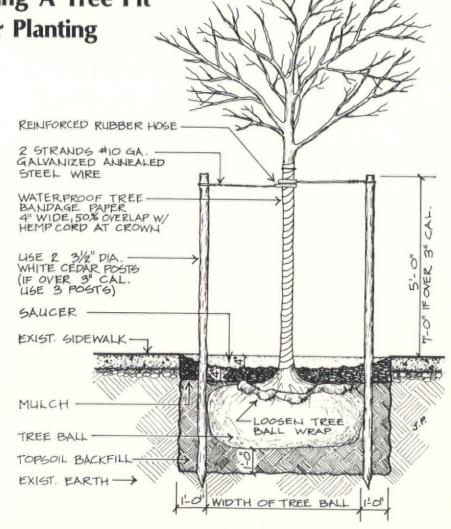
Preparing A Tree Pit For Planting

Caring For Your American Elm

There is no replacement for this noble tree, but there is effective, long-term protection against the deadly effects of Dutch Elm Disease (DED).

Fortunately, old elm trees — the kind people are interested in saving — lack vigor. This lack of vigor results in slow growth during the active spring / early summer growth period, when the Elm Bark Beetle, the disease vector, is on the move. Small, thick-walled plant cells and a sluggish circulatory system characterize an old-timer. If a tree is infected with DED, these traits will help slow down the progress of the disease; they even help wall off infection, thus allowing the tree time to marshall the immunological resources that enable it to resist.

Your active involvement can make a difference. For information, write Dr. Gerald N. Lanier, Professor of Entomology, S.U.N.Y., College of Environmental Science & Forestry, Syracuse, NY 13210, and ask him to send you, free, his "Guide to Care of American Elm," the expanded notes of his Sept. 30, 1980, lecture in Chevy Chase, Md.



Selecting Your Tree

ANY MUNICIPALITIES require new street trees to be no less than 1½ or 2 in. in caliper (the diameter of the trunk, measured 6 in. above the root crown) and 10 to 14 ft. high. A tree with branching below 6 ft. gets in the way of pedestrians; trees much smaller than 10 ft. offer little branching above to bring amenity to the street.

A 3- TO 4-IN. CALIPER is about as large as you should consider. For a tree of this size, the depth of the root ball is at least 18 to 24 in.; the diameter of the ball, between 30 and 40 in. A rule of thumb is that there should be 10 in. of ball diameter for every inch of caliper.

MAKE SURE the weight of the root ball doesn't make the tree unmanageable. Damp weight of soil varies, averaging perhaps 60 lbs./cu.ft. Larger sizes may be selected if the supplier will deliver and unload the tree, but even two people might find it difficult to lower a root ball over 300 lbs. into the prepared pit.

BUY AND TRANSPLANT the tree when it's dormant: its buds present but not open, just as the tree is in winter. (Trees can be planted any time until the ground freezes.) If the tree has leafed out, the new leaves are subject to mechanical damage in transit and planting. They're also more disease prone and can wilt at a time of year when day temperatures reach into the 80s.

Planting Procedures

DIG A PIT at least 2 ft. larger than the diameter of the ball and 1 ft. deeper. Discard the excavated soil and backfill with good topsoil in a pH range of 5.7 to 7. If you reuse the old soil, add 1 cu.ft. of peat moss, 1 cu.ft. of perlite, 1 lb. of agricultural lime, and 2 lbs. of planting formula (5-10-5 fertilizer) to every ½ cu.yd. of backfill (13½ cu.ft. = ½ cu.yd.). Fertilizers with high phosphate content (the second number on the bag) induce good root growth.

LAY DOWN backfill in 3- to 4-in. thicknesses. Tamp down with your feet until firmly packed but not hard packed. Measure the decreasing pit depth as you go, so that the root ball when placed is at the proper elevation. After the tree is set down and leveled, continue backfilling. Set stakes against the outside of the ball at this time, or drive them with a sledge hammer after backfilling. After the tree is staked and guyed, loosen the burlap wrap and cords around the top of the ball.

TO WATER THE TREE thoroughly, poke a hole 1 or 2 ft. deep into the soil with a stick or crowbar and insert the hose into the hole. Turn on a moderate flow of water and wait for it to bubble up to the surface. If small amounts of soil wash downward, add soil until the proper level is reached. Every few days, push your fingers into the soil and check it for moisture. If it feels cool and moist, don't water.

A 4-IN. LAYER of mulch will THE ROOT BALL should be wrapped in burlap and bound in hemp cord. Reject any plashold soil moisture by keeping the soil cool, thus helping tic or plastic-impregnated burlap tied root growth and the rapid in plastic cord; the tree can't work absorption of nutrients. Pine out of these materials. Reject the tree if the root ball is loose, bro-ken, or looks reconstructed. The bark mulch or shredded hardwood fiber is best because it won't erode much during summer roots will have suffered severe, often fatal damage if the downpours. Never use peat moss, which cakes up and prevents water penetration. Als soil hasn't been hug-A1so ging them. refrain from using black IF THE TREE is alive, its plastic sheeting, either alone or under mulch. branches won't break when retards air movement under gently bent down. You should the soil, thus encouraging also check the cambium: Grasp the build-up of anaerobic baca minor branch and dig in your thumbnail, just enough to break the bark. If the layer below is teria and gases. green, that's the cambium, and the tree is alive. REJECT ANY TREE with scrapes, holes, crevices in the bark, and accumula-tions of scaly matter around buds or in branches or crotches. Look for sticky ooze along new branches. These are all indications of insect pest damage. BE CHOOSY -- the tree you purchase from a retail nursery rarely comes with a guarantee. Look for a good appearance: A nicely shaped crown, one definite leader, and good heavy branching are all important. Avoid forked trees. As the

often tend to split apart.

tree grows, each of the opposed forks gains weight, and the tree will very

Ginkgo Tree & Leaves

ADDITIONAL APPLICATIONS of fertilizer are usually unnecessary during the first or second growing seasons. Afterwards, quick-acting, chemically balanced liquid fertilizer may be used. It should be applied as directed, immediately after the soil has been soaked with plain water. Apply fertilizer during the active growing season, up until the first week of July.

CUTTING BACK BRANCHING at the time of planting is unnecessary, unless broken or damaged branches need to be removed. Tree paint is also unnecessary, except for cosmetic purposes. Don't plant flowers, ground cover, or grass at the base of the tree for the first two years. They'll only compete with the tree for soil nutrients and moisture.

Care & Maintenance

Where the sun shined most intensely on it when it was first grown in the nursery. When you plant the tree, the thinner bark can wind up facing the sun, and sunscald can occur: The bark dries out, shrinks, and cracks down to the hardwood--a fatal development. To protect your tree from sunscald (and to discourage vandals), wrap it with paper as shown in the drawing on page 155. The growth of the tree will eventually break the paper off it. A less vigorous tree won't break the paper; tear it off yourself after about two years.

ORDINARY CUTS AND SCRAPES, including removal of small bark areas, will mend if sheep's lanolin is applied and the area wrapped in burlap or paper. (Sheep's lanolin, in cans or tubes, is available from any drugstore.) Girdling, the removal of a strip of bark from the entire circumference of the tree, is a vicious vandalism. It is usually fatal to the tree, but tree surgeons have rescued girdled trees by performing a bark graft.

WITH A BARK GRAFT, the wound is bridged in at least two places by using bark (with cambium) taken



Black Locust Leaves & Tree



from an adjacent area of the tree. It's pressed hard, even nailed against the trunk, to connect the living cambium tissue. All seams and edges are then painted with lanolin and wrapped tightly in burlap. Grafts have to be inspected once a week during the first growing season.

AN OCCASIONAL VISIT by man's best friend is no cause for alarm. But it's unhealthy for your tree to become a comfort station for all the dogs in your vicinity. Try to communicate with the dog's owner if possible; if not, a galvanized metal tree guard or low fence is a practical deterrent.

CHECK EVERY SPRING for any evidence of disease or insect pests. If you find anything that doesn't seem quite right, it's best to send a sample immediately to your state agricultural extension service, along with a few color snapshots. They can usually offer sound advice.

Dan Maciejak, a regular contributor to The Old-House Journal, is a landscape architect in Brooklyn, N.Y. Patti Allison, a free-lance illustrator, works for the New York State Office of Parks, Recreation, and Historic Preservation.

plumbing basics continued from p. 133

LD PLUMBING isn't all bad news. ly, the piping networks -- the key part of the system -- were usually made of bestquality materials and installed with expertise. Good old piping invites renovation rather than replacement. It may be tempting for a contractor to "simplify things" by starting fresh. But repair and renovation (instead of wholesale replacement) may offer cost savings as well as higher quality. So be sure your existing system is carefully assessed. Cast-iron waste pipe and copper or brass water lines, common in old houses, are still regarded as the premier

materials of the industry. Even galvanized pipe, today regarded as inferior and banned in some cities for new construction, tends to have a thicker, more resistant coating in old

installations.

ON THE OTHER HAND, inevitable repairs over the years probably haven't matched the system design, materials, or quality of the original features. And it's not only age that puts old-house plumbing into a special category. Many practices and materials of the past are now seen as inferior. Plumbing technology was in development until well into the 20th century. A post-Victorian house undoubtedly still contains some or most of the early plumbing. In even older homes, indoor plumbing was a later addition: Initial compro-mises must have been necessary just to make things fit.

ALL THIS IS TO SAY that oldhouse plumbing can have hidden Some flaws blessings or be an expensive curse. DO require piping replacement -- and it's important for the house owner to accept that fact in such cases. But other problems can be remedied by maintenance or selective pipe repairs.

Common Supply Problems

NOISE AND PRESSURE LOSS

DESIDES ROUTINE MAINTENANCE of faucets, the most prevalent water supply troubles result from the deterioration of piping. Corrosion is most pronounced with galvanized iron pipe. As the iron corrodes, iron oxide literally grows from the pipe wall. Inside the pipe, the area intended for water flow becomes restricted. The same volume flow of water must pass through at higher speeds and greater pressure losses, resulting in increased noise (or "water hammer") and lower pressure at the Eventually the pipe may become completely plugged ... eliminating the noise, but also eliminating the carrying capacity of the pipe! If you suspect blockage, the piping must be opened and inspected at a convenient location. Replace pipe as needed. Cleaning is rarely an effective, long-term solution.

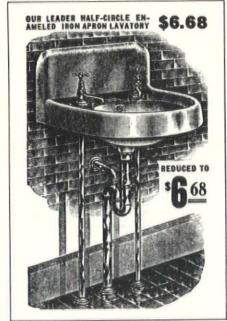
PRESSURE-LOSS PROBLEMS are also caused by plumb ing additions over the years for which the original service or piping was not intended. If pressure drops below the minimum, flow may become erratic, causing temperature fluctuations and poor water service at the faucet.

NOISE IN THE SYSTEM can also be caused by piping which is not properly secured. When water flow is stopped abruptly, as it is when a faucet is shut off, a dangling pipe will bang and rattle. Adding some more pipe hangers alleviates this problem. Another solution to water hammer -- regardless of its cause -- is to install an air chamber along the supply line near the fixture. There are several different kinds of air chambers, but they

all work as a simple cushion, absorbing the shock of the abrupt flow stoppage. Some old fixtures may have capped air chambers which are no longer effective at relieving the shock. If it seems necessary, your plumber can install rechargeable air chambers on the hot and cold branch water lines or add special shock absorbers to the system.

COPPER OR BRASS PIPING does not corrode as aggressively as galvanized. But problems can develop where these pipes connect to fixtures, valves, or other piping of a different metal. Contact between dissimilar metals sets up conditions for electro-chemical reactions called galvanic action, which corrodes metal. The result is a restriction of flow area in the pipe, higher velocities, and pressure drops -- just as with internal rusting. difference is that galvanic corrosion is both more rapid

and more confined, generally occurring in the immediate area of contact.



from Sears, Roebuck catalog, 1908

LEAD PIPING

THE USE OF LEAD PIPING was a popular watersupply practice as late as 1940. It has since been recognized as a health hazard. Once so characteristic of water/waste systems that it lent its name to the activity ("plumbing" is derived from the Latin "plumbum": lead), lead is now known to contaminate the water supply. The contamination is a potential source of lead poisoning, a cumulative ailment that becomes very real to people who use the system for many years.

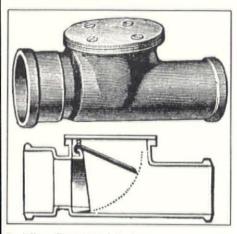
LEAD IS IDENTIFIED by its grey color -- silver when scratched -- and its relative softness. It should be replaced if present. Because of its flexibility, lead was especially popular for the main service connection at the water meter. It's hard to determine whether an individual service is lead without digging it up, but water utilities will often provide the information. At least, they can confirm the date of installation and give you an idea of the materials that were used at that time.

Plumber _ Talk

ABS — Rigid black plastic pipe and fittings. Generally used for gravity drainage in sewer and storm water systems. Introduced in 1960s; popular for new residential construction and remodelling.

Angle Stop — Shut-off valve arranged in 90degree configuration. Popularly used for maintenance shut-offs at fixtures.

Backflow — The passage of liquids into a potable water system from any source other than the intended supply.



Backflow Preventer / Backwater Valve — Devices used to prevent reverse flow in water (backflow) and waste systems. Usually in the form of a check valve.

Bell & Spigot — Popular method of joining cast iron pipe. May be used with either lead and oakum or compression seal.

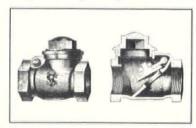
Black Water — Waste water containing human waste; i.e., discharge from toilet or urinal.

Branch — Any part of a piping network other than a main, riser, or stack.

Brazed Joint — Pipe joining method using an alloy melting at temperatures above 800 F., but lower than the melting point of the piping. Often used on copper piping underground, or in critical locations.

Cement Joint — Pipe joining method using a solvent welding process. Used on almost all plastic piping.

Cesspool — A lined excavation in the ground which receives sewer discharge. Designed to retain organic materials for decomposition, and allow liquids to seep through sides and bottom.



Check Valve — Valve designed to prevent the reverse flow of liquid.

Combination Waste & Vent — A specially designed horizontal drain acting as a common waste and vent.

Cross Connection — Any piping or fixture arrangement through which non-potable liquids or substances may enter potable water supply.

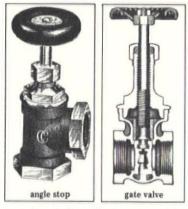
Drain Field — An area over which liquid from a septic tank or cesspool is discharged and allowed to percolate through the soil.

Drum Trap — A trap with top access for cleaning. Also used for special venting purposes. Popular prior to 1930, but current use is limited.

Dry Joint — Pipe joining method in which a gasket or sealer is not used. Usually used with clay or concrete hub & spigot piping underground and outside buildings.

Durham System — Soil or waste pipe network using threaded pipe and fittings. Usually galvanized pipe and cast iron fittings, often used in conjunction with cast iron systems.

Galvanized Pipe — Steel pipe with a protective zinc coating.



Gate Valve — A shut-off valve using a rising disc (gate) to control liquid flow.

Grade — Slope of a pipe relative to the horizontal.

Grey Water — 'Dirty' water not containing human waste; i.e., discharge from lavatories, sinks, tubs, and laundries.

House Drain — The lowest main horizontal line in a drainage system extending to a point 5 ft. outside the foundation line.

House Sewer — That portion of the drainage system extending from the house drain to the connection with a septic or public system.

House Trap — A trap located in the house drain just inside the foundation wall. Popular prior to 1920, but no longer in common use.

Lavatory - Bathroom sink.

Main — Principal artery in a piping network to which branches are connected.

Mortar Joint — Pipe joining method where cement mortar is used as a sealing compound. Used on concrete or clay pipes underground.

Potable Water — Drinkable water free from unhealthy compounds and organisms.

PVC, CPVC — Rigid plastic pipe and fittings used for water supply and waste disposal. Introduced in the 1960s, it's becoming more and more popular for new construction. Not allowed by code in some parts of the country for water supply.

Riser — Water supply pipe which extends vertically one or more floors.

Septic Tank — Concrete or plastic container into which sewage is discharged. Designed to retain organic matter for decomposition, and allow liquids to overflow to drain field. Serves same function as a cesspool.

Sewer Gas — Noxious gases permeating sewer systems. Always unpleasant, often unhealthy, sometimes explosive.

Slip Joint — Pipe joining method using a compression ring or gasket.

Soil Pipe - Pipe conveying organic waste.

Soldered Joint — Pipe joining method using a metal alloy (tin/lead) melting between 300-800 F. Used on copper piping.

Stack — Waste or vent pipe that extends vertically one or more storeys.

Sump — Tank or pit below normal gravity drainage system into which wastes are discharged and then pumped to a gravity sewer.

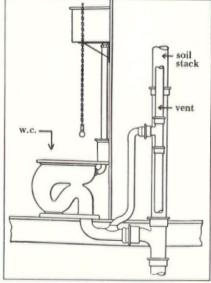
Supply System — Piping network and fittings conveying water from the water utility to the point of use.

Trap — A fitting to provide a liquid seal that prevents the back passage of gases, without materially affecting the flow of sewage or water through it.

Trap Arm — Portion of the fixture drain between the trap and vent.

Trap Seal — The volume of liquid retained by a trap to prevent back passage of air.

Vent — Pipe installed to provide flow of air to or from a drainage system, and to minimize possibilities of trap siphonage and back pressure.



Waste System — Waste piping consisting of the building sewer, house drain, waste stacks, horizontal branches, fixture drains, vents, and traps.

Water Closet - Toilet.

Water Hammer — Sudden pounding noise in a piping system caused by rapid pressure changes due to valves or other restrictions.

Water Utility — An agency supplying potable water to a number of users.

Welded Joint -(1) Metal pipe: joining of pipes in a molten state. (2) Plastic pipe: Solvent welding; same as 'cement joint.'

Wet ${\sf Vent}-{\sf A}$ vent that also serves as a drain. Permitted only in specific conditions.

WATER SUPPLY				
PROBLEM	CAUSE	CURE	COMMENT	
Leaky valves and faucets	Normal wear	Replace washers.	Low cost. Routine maintenance by owner.	
T value of a va	General corrosion	Replace pipes, fittings, or tanks.	High cost. Contractor repair.	
Leaky pipes and tanks	Dissimilar metals	Replace damaged material. Isolate different pipe materials with dielectric unions.	COMMENT Low cost. Routine maintenance by owner High cost. Contractor repair. Moderate cost. May be owner repair. Exami piping for general corrosion, Contractor repair likely. May indicate more extensive problems. Flush lines thoroughly p to continued use. Moderate cost. Owner repair unless pipe is dan High cost. Contractor repair. Booster pump is a last resort for this problem cost about \$250. Low cost. Homeowner repair. High cost. Contractor repair. Moderate cost. Contractor repair. Bad omen: indicates possible contamination of supply. Well may require investigation by mun or private experts.	
No water	Dead water supply	Contact water utility or remedy well problem.		
	Plugged pipe	Backflush lines and/or replace piping.	extensive problems. Flush lines thoroughly price	
	Frozen pipe	Thaw, then insulate, bury, or trace with heat tape.	Moderate cost. Owner repair unless pipe is dama	
Low water	Corrosion or improper line size	Replace piping with adequate size and quality.	High cost. Contractor repair.	
pressure	Low supply pressure	Contact water utility or adjust well pump discharge pressure.	extensive problems. Flush lines thoroughly p to continued use. Moderate cost. Owner repair unless pipe is dan High cost. Contractor repair. Booster pump is a last resort for this problem cost about \$250. Low cost. Homeowner repair.	
	Dangling pipes	Install additional pipe straps.	Low cost. Homeowner repair.	
Noise	High water velocities	Replace piping with adequate size and quality.	High cost, Contractor repair,	
	Water hammer	Install shock suppressor.	Moderate cost. Contractor repair.	
Dirty water	Water source (dirt & sediment)	Contact water utility or remedy well problem.	Bad omen: indicates possible contamination of w supply. Well may require investigation by munici or private experts.	
_ and manual	Corrosion (rust)	Replace pipe or fittings.	Booster pump is a last resort for this problem cost about \$250. Low cost. Homeowner repair. High cost. Contractor repair. Moderate cost. Contractor repair. Bad omen: indicates possible contamination of supply. Well may require investigation by munic or private experts. May indicate significant problems in supply pi	

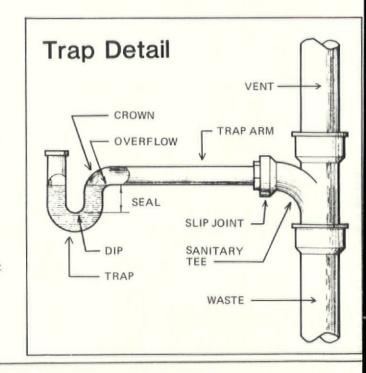
Does your plumbing work? In many old houses, that question can't always be answered with a confident 'yes.' Your plumbing may need work . . . and the job will fall somewhere between routine maintenance and full replumbing. These charts indicate the true nature of common ills.

Common Waste Problems

THE WASTE SYSTEM PIPING is subject to the same corrosion as supply lines. Although the conditions in each system are fundamentally different, the result is similar: Piping must be replaced after corrosion has reached an unacceptable level. Corrosion in waste pipes shows up as leaks or slow drainage. Extensive corrosion is visible at joints and fittings. Likewise, if you don't see apparent corrosion at joints and fittings, replacement of piping is probably unnecessary.

HORIZONTAL DRAIN LINES must be installed with a minimum pitch toward the sewer. This statement seems obvious, as liquid does not ordinarily flow uphill. But in old houses -- where settlement has occurred -- it is often necessary to realign the waste piping to assure that all parts of the system pitch to the drain point with a minimum slope of ½-in. per foot.

MUCH LESS APPARENT is inadequacy in the trap and vent system. Your drain piping is connected to a sewage disposal system which has the capacity to generate unfriendly vapors.



WASTE PIPING						
PROBLEM	CAUSE	CURE	COMMENT			
	Blockage	Plumber's helper or drain cleaner.	Follow instructions carefully. Stronger measures may well be necessary. Low cost unless plumber is required.			
Clogged drain or slow drain	Inadequate drain grade	Re-align waste pipe to a minimum ¹ 4-in. pitch per foot of run.	Low cost if owner repair.			
	Inadequate waste or vent	Replace or install piping to suit requirements.	High cost. Contractor repair.			
Odors	Poor venting	Replace or install piping to suit requirements.	High cost. Contractor repair.			
	Trap evaporation	Use trap regularly or install trap primer.	Trap primer cost $\$50-100$ depending on layout.			
Noise	Normal operation	Insulate pipes or replace with cast iron.	Plastic or copper waste pipe conducts noise very wel Insulation helps but cast iron pipe is the most thorough solution.			

Do wastes drain rapidly? Does your house smell okay? The chart above delicately explores the causes and cures of waste-pipe problems common to old houses.

(A fiendish mixture of methane, an explosive gas, with other gases, acids, and caustics.) The vapors move throughout the waste plumbing system and, if unchecked, will enter the house. Traps hold the last of a waste discharge to form a seal against entry of these sewer gases. The gases can then migrate to the atmosphere through the vent system. At least that's the way today's accepted plumbing systems work.

VENTS ALSO PROTECT the traps from being siphoned dry. Older plumbing usually incorporates some kind of trap, but vents were once considered optional. Consequently, the traps were not always functional. As a volume of water runs down a waste pipe, it creates a higher air pressure on the downstream side and a lower pressure upstream; in other words, it compresses air ahead of itself and creates a vacuum behind, as would any solid body moving through a fluid. Without adequate venting, that vacuum allows atmospheric pressure to push the trap liquid into the waste system, thereby destroying the water seal and leaving an open channel for sewer gas migration into the house.

SUCH SIPHONING might occur only under some situations, such as the emptying of a big plug of water all at once. How to resolve a sewer gas problem, therefore, can be quite a mystery. Old houses are vulnerable for two reasons: (1) The plumbing may have been originally installed without proper vents; (2) Plumbing additions may have compromised the integrity of the vent system. A similar problem occurs with seldomused fixtures, such as floor drains. Trap liquids evaporate over a period of several months; if they're not replenished, loss of seal may occur. A trap primer (essentially a constant trickle of water) is often installed to eliminate the possibility of evaporation. If odor problems plague your old house, a careful review of each fixture's trap and vent is in order. You'll have to open the wall and see whether it's vented.

Cross Connections

CONTAMINATION OF POTABLE WATER is the most serious potential hazard in plumbing. A review of old-house plumbing afflictions is not complete without an explanation of cross connections. Because it's likely that much of their plumbing was done before cross connection potential was fully understood, old houses are particularly susceptible. It most commonly occurs through siphoning.

AN EXAMPLE: During a '20s remodelling, a bathtub was installed without an overflow drain. Furthermore, the faucet was installed in such a place that it's possible to fill the tub so the water level covers the faucet. If, while the tub is being filled and the water is already up over the faucet, there's a pressure drop due to routine demand from another fixture, the tub water could be siphoned into the supply lines.

PRIMARY SOURCES for concern are leaky underground pipes, hose connections, and underground lawn sprinkler systems. In short, any time there is no break between supply water and non-potable water, the potential exists for cross contamination. Backflow preventers or vacuum breakers can be installed where you suspect cross-connection potential.

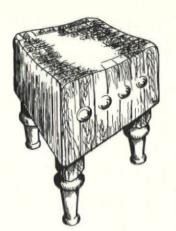
GARY FEUERSTEIN is a licensed professional engineer with Resource Applications, 525 NW Harrison, Corvallis, OR 97330.

More old-house plumbing to come: Future articles will help you choose among pipe and fixture materials, understand codes, and communicate with plumbers and equipment suppliers.

In an upcoming issue, Mr. Feuerstein will answer readers' questions about their plumbing problems. Address questions to *Plumber*, OHJ, 69A Seventh Ave., Brooklyn, NY 11217.

For more information about the basic principles of a plumbing system, refer to *Modern Plumbing*, part of the three-volume set of how-to books — see 'Bookshop' listing in back of this issue.

BUTCHER BLOCKS Cleaning, Restoration, & Maintenance



What do butcher blocks have to do with old houses? Frankly, not a heck of a lot. But for quite a while, we've received a steady stream of enquiries on this subject, particularly concerning how to clean and maintain them. So here's what we've found out. (For information on manufacturers of butcher blocks, see Restoration Products, page 163.

By Larry Jones

CONSTRUCTION & SELECTION: Typically, butcher blocks were made from hard rock maple, but sugar maple, beech, and birch have also been used. Oak was used more rarely, as it's too porous and cannot be chopped on. (In fact, it's not permitted for commercial meat markets.) Most butcher blocks are end-grain solid block construction. (Side-grain is okay for countertops and cutting, but not for chopping.)

FIND AN OLD CHOP BLOCK with tight joints--dove-tail joints are best. Through-bolting of the block also creates strong, tight joints. Avoid purchasing old blocks with open or separated joints--you won't be able to fill them satisfactorily with wood putty. The deep cracks, holes, and crevices of an old block can trap food particles. That stuff decays and breeds bacteria, which in turn can contaminate fresh foods that are placed on the cutting surface. (The difficulty of keeping the top free of cracks has prompted many meat markets to switch from wood to Dupont Corian.)

CLEANING & REDRESSING: The best and least destructive method of cleaning built-up dirt and grease from an old block is by scraping. Use a not-too-sharp, wide-blade hand scraper, available in hardware stores. Gently scrape the top, taking care not to remove any wood.

SANDING is rather labor-intensive because the grease can load up the sandpaper. However, if you have the patience, the grease will act as a lubricant on the end-grain and will make the final surface very smooth. A belt sander can be quite harsh, but may be advisable for older blocks with very rough surfaces. A rule of thumb: Scrape before sanding.

VERY ROUGH, dished-out, and uneven tops may have to be commercially cut down to achieve a smooth, flat, workable surface. Taking a chop off the old block (sorry) isn't quite as drastic a procedure as it may sound. All good old chop blocks were intended to be periodically resurfaced--which meant removing a portion off the top each time.

AFTER SCRAPING, you may want to scrub the surface to clean it of any remaining grease and dirt. Scrub cautiously: Water is destructive

to wood, especially to end-grain wood butcher blocks. The wood expands and contracts, thus opening cracks in the chopping surface. So when cleaning the block, use as little water as possible. And never leave any standing water on the block. Follow up any washing by rubbing a coat of mineral oil into the wood. This will prevent the checking and cracking that can occur when the wood dries out.

SCRUBBING with industrial soap and water can remove grease. (TSP is effective but may not cut all the grease.) Other useful solvents and cleaners are Gunk auto degreaser (wash it off with water and immediately towel dry), mineral spirits, naphtha, lacquer thinner, an acetone (go over these with a damp rag and a stiff bristle brush, using very little water) Don't attempt to finish the wood until the so vents evaporate out--wait about six hours.

MAINTENANCE: The number one concern is not to put anything on or in the wood which is toxic or can have any kind of harmful effect on foods. To maintain the surface, fill in the cracks, and keep the wood from drying out, block-manufacturer J. Boos recommends the following formula: 1 part paraffin and 4 parts non-toxic mineral oil. Melt them together in a double boiler. (Paraffin is highly flammable.) Apply this mix to the top every four to six weeks. A soft, non-metallic scraper (a spatula or windshield scraper) is handy for scraping off the excess. Then burnish the surface to the desired sheen.

EVERY TWO OR THREE WEEKS, touch up the surface with mineral oil alone. Vegetable oil isn't good because it can go rancid; linseed oil tends to become too hard and dark to be used on top of the block. Watco oil stain (which is toxic until it dries) can be used on the top if you want to add a little glow. But you'll never get an even, furniture-like finish, because the surface is impregnated with tallow. (But don't worry, these non-toxic animal fats won't contaminate the food.) The sides of the block receive less wear and team and don't come in contact with food, so they can be sanded and finished more conventional.

THE PARAFFIN-OIL MIX is also good to apply to the underside of the block, to prevent cracking and checking. If you're planning to traport the block over a long distance, you migh want to thoroughly coat the entire block with this mix to reduce the chances of splitting and cracking due to climatic changes.



Lincrusta Makes A Comeback!

Success! Our articles about embossed wallcoverings (Oct. & Nov. 1982) stirred up enough interest to make Crown, the English manufacturer, sit up and take notice of the American market. To all the OHJ subscribers who wrote their encouragement to Crown: Thank you. You've got four reissued, original Lincrusta patterns to choose from.

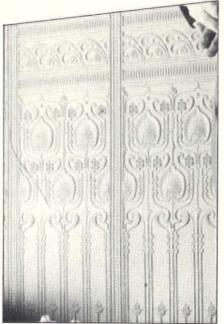
The "new" patterns are late Victorian and turn-of-the-century designs. Nouveau, a dado with an Arts and Crafts feeling, is produced in 211/4-in.-wide x 36-in.-high panels; the Edwardian dado is 24 in. wide x 40 in. high. Dados are sold as five-panel sets, \$70. A third pattern, Italian Renaissance, is a floral wall fill in 21-in, wide rolls. And to complement the room setting, an 18-in. frieze. Both of these are sold in 33-ft. long rolls for \$70.

A major U.S. distributor for Crown is Bentley Bros. They also stock Crown's



"Italian Renaissance" (above) and the "Edwardian" dado (right) were reproduced in glorious black & white from a color brochure - all we could get by deadline. Take my word for it: The patterns are terrific!

complete line of Anaglypta and Supaglypta. Items are sold mail-order or through their store, which features several actual room settings. Product information and samples are \$3; be sure to specify your interest in Lincrusta to get the current literature. Bentley Bros., 918 Baxter Ave., Dept. OHJ, Louisville, KY 40204. (502) 589-2939.



Butcher Blocks

Butcher blocks, a useful addition to a true working kitchen, are sold through The Building Block. Made of end-grain maple, stock sizes range from 18 in. x 18 in. to 30 in. x 60 in. and 6-, 12-, 14-, or 16-inch thicknesses. Their 18 x 18 x 12 model on four legs weighs 130 lbs. and costs \$152.50; the largest stock model is 30 x 60 x 16, weighs 800 lbs., and costs \$753.30.

Butcher block can also be used in lieu of Formica counters. It's stocked 1½ in. thick, 25 in. deep, in 18-in. to 25-ft. lengths. An 18-in. length is \$26.99; quantity discounts are offered. No literature. The Building Block, 145 E. 27th St., Dept. OHJ, New York, NY 10016. (212) 684-1836.

The two companies below won't sell direct, but they'll be happy to put you in touch with one of their distributors.

John Boos Co. manufactures 4-, 5-, or 10-in.-thick butcher blocks in Northern hard rock maple. Sizes range from 18 in. to 30 in. square; they also offer a 24-in, diameter, Free catalog, John Boos Co., 315 S. First St., Dept. OHJ, Effingham, IL 62401. (217) 347-7701.

Tuohy Furniture makes butcher blocks in red oak. Stock sizes range from 24 in. square to 52 in. x 168 in.; acquer finish. They'll also do custom izes in your choice of wood. No literature. Tuohy Furniture Corp., 42 St. Alban's Place, Dept. OHJ, Chatfield, MN 55923. (507) 867-4280.



Ceiling medallions, also known as rosettes or centerpieces, are manufactured in gypsum, various polymers, composition, and traditional plaster. Prices are comparable around the country, generally about \$25 for an 8-10 in. up to \$1500 for detailed plaster, 8 ft.; about \$500 for polymer, 72 in. But because of the weight (especially in plaster) and the potential damage in shipping, you may want to choose a nearby supplier. Besides stock designs, almost all of these sources will do custom work.

Architectural Sculpture, 242 Lafayette St., Dept. OHJ, New York, NY 10012. (212) 431-5873. Plaster. Brochure, \$2. Balmer Architectural Art Ltd., 69 Pape Ave., Dept. OHJ, Toronto, ONT, Canada

M4M 2V5. (416) 466-6306. Reinforced gypsum. Complete catalog, \$14; a ceil-

ing brochure is \$1.

Biagiotti, L., 229 7th Ave., Dept. OHJ, New York, NY 10011. (212) 924-5088. Custom & stock plaster. No literature.

Decorator's Supply Corp., 3610-12 S. Morgan St., Dept. OHJ, Chicago, IL 60609. (312) 847-6300. Ornate, reinforced plaster. Plaster Ornaments, \$3.

Dovetail, Inc., PO Box 1569-102, Dept. OHJ, Lowell, MA 01853. (617) 454-2944. Gypsum-cement reinforced with fiberglass. Brochure, \$3.

Entol Industries, Inc., 8180 NW 36th Ave., Dept. OHJ, Miami, FL 33147. (305) 696-0900. Urethane polymer or reinforced gypsum. Brochure, \$.50.

Felber, Inc., 110 Ardmore Ave., Dept. OHJ, Ardmore, PA 19003. (215) 642-4710. Plaster. Brochure, \$.50.

Fischer & Jirouch Co., 4821 Superior Ave., Dept. OHJ, Cleveland, OH 44103. (216) 361-3840. Wood-fiber reinforced plaster. Catalog, 1500 items, \$25; photocopies of specific items, free.

Focal Point, Inc., 2005 Marietta Rd., NW, Dept. OHJ, Atlanta, GA 30318. (404) 351-0820. Light-weight polymer. Direct or through distributors. 19th-Century Collection brochure, \$1.50; color catalog, \$1.50.

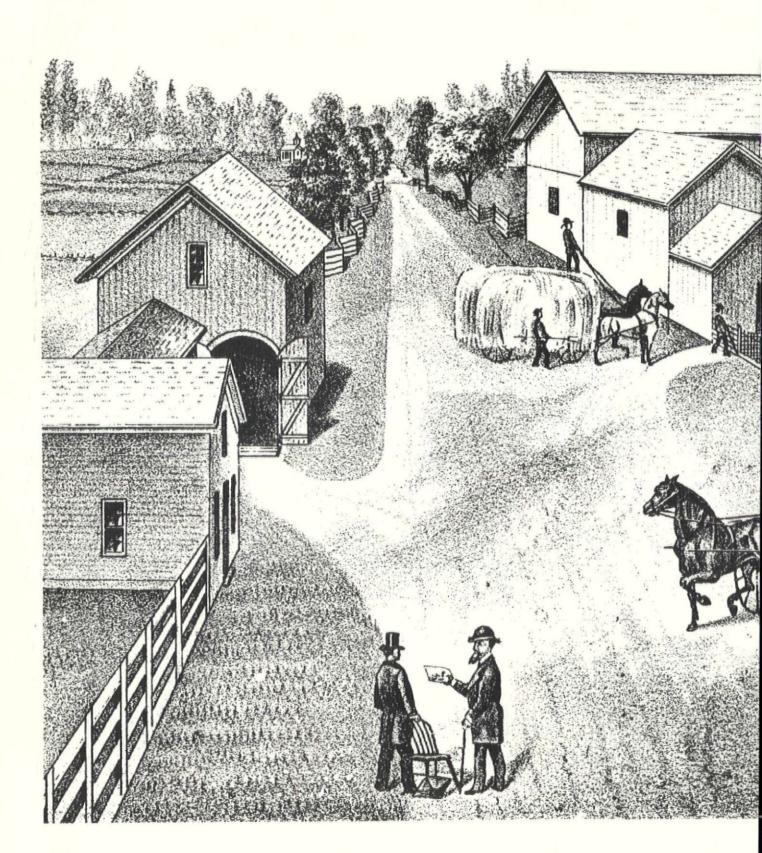
Giannetti Studios, 3806 38th St., Dept. OHJ, Brentwood, MD 20722. (301) 927-0033. Fiberglass-reinforced plaster. Brochure, \$3, refundable upon purchase. Albert Lachin & Assoc., Inc., 618 Piety St., Dept. OHJ, New Orleans, LA 70117. (504) 948-3533. Plaster. Free flyer.

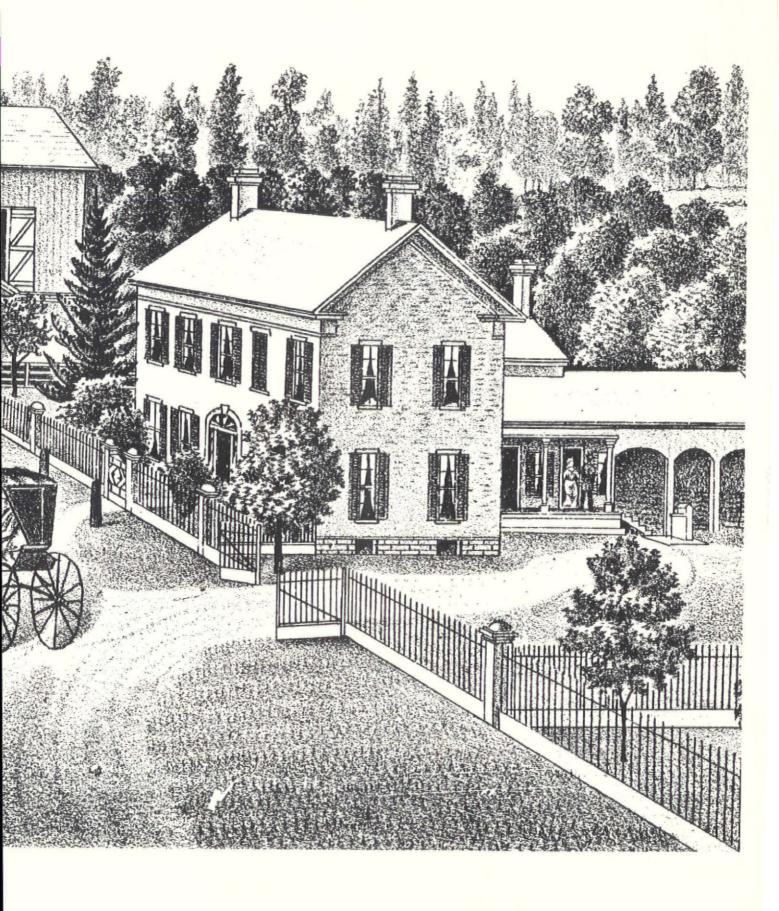
Orlandini Studios Ltd., 633 W. Virginia St., Dept. OHJ, Milwaukee, WI 53204. (414) 272-3657. Plaster. No literature.

San Francisco Victoriana, 2245 Palou Ave., Dept. OHJ, San Francisco, CA 94124. (415) 648-0313. Reinforced plaster. Complete 70-page catalog,\$3.

J.P. Weaver Co., 2301 W. Victory Blvd., Dept. OHJ, Burbank, CA 91506. (213) 841-5700. Composition. Literature, \$1. W.T. Weaver & Sons, 1208 Wisconsin Ave., NW, Dept. OHJ, Washington, DC 20007. (202) 333-4200. Only 6 styles in

styrene. Free brochure; catalog, \$2.50.



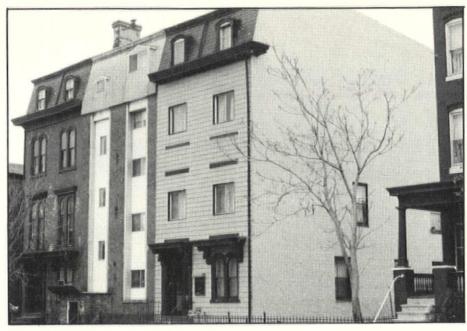






WHEN SUBSCRIBER John Rogers of Baltimore, Maryland, sent us these photographs, he wrote, "You may have your choice as to which of the two 'renovations' is more tasteless." And indeed, the two houses demonstrate different ways to destroy the integrity and character of an old house.

THE HOUSE ON THE RIGHT is your standard remuddling. The most glaring changes are of course the aluminum siding and the altered fenestration. take a look at those odd horizontal stripes jutting out of the aluminum between the second- and third-storey windows. They're the leftovers from the original stone lintels. probably went all the way through the wall and so could They not be easily removed.) must now be doing an excellent job of collecting rainwater and pigeon poop. As forlorn, incongruous reminders of lost



beauty, they're matched by the portico and lintel on the first storey--they seem to mutely ask, "Where did everybody go?"

THE HOUSE in the middle represents another way to fumble an old house's uniqueness; it's an insensitive adaptive re-use. We strongly suspect that it's been remodeled for commercial purposes--it looks like they even installed a new stair, judging by the windows over the portico. A glance at the other vertical row of windows, however, tells a far weirder tale: This house was converted

from four to five storeys--mayhem that affected the building's structure. Note those three dots in between the two rows of windows. They're tierod ends, and they're holding the front of the house onto the rest of the building.

WE FIND IT hard to believe that these two remuddlings represented savings of time, money, or energy over the decision to properly restore the houses. One of these rowhouses has been handled with respect and care. But it loses out to its neighbors.--Cole Gagne

The Old-House Journal

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OHJ Staff and Contributors on the Occasion of the Tenth Anniversary Ball. Standing: Larry Jones, Cole Gagne, Ray Madera, John Mark Garrison, Clem Labine, Jonathan Poore, Alan D. Keiser, Paul T. McLoughlin. Seated: Peggy Scaglione, Anne Walsh, Jeanne Baldwin, Joni Monnich, Patricia Poore, Barbara Bugg, Joan O'Reilly. (Deborah Litt is not pictured.)



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In the next issue . . . MAKING DECORATIVE LATTICE

The Year Was 1883...

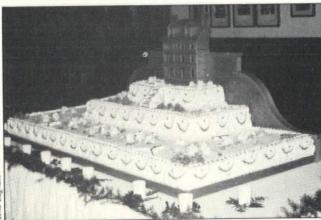
FOR ALL THOSE who've ever thought about having a Victorian party, here's a glimpse of ours! We're not sure which was more fun: the planning or the event itself.



INVITATIONS were sent early to the 200 guests, all of whom were directly responsible for making our first ten years successful and fun. Virtually everyone showed up in period dress. Queen Victoria, our Royal Patron, arrived in a horse-drawn coach ... a barbershop quartet strolled among arriving guests ... Parlour Entertainments included two scenes from "The Drunkard," a lesson in Moral Fervour and Uprightness ... waltzing lasted until the wee hours.

THE PARTY was held in Brooklyn's Montauk Club, an utterly Victorian building right in our neighborhood. Spilling over with terra cotta and stained glass, moulded plaster and walnut, it provided the perfect backdrop.

THE EVENING was passionate. Whatever one might think of the social mores of the Victorian era, it's hard to deny that Victorian excess can translate into one heck of a party!



above — Patricia and Clem introduce the Parlour Entertainments: staff and guests performing c. 1883.

left — The 3x6-foot cake, designed by friends of the family, featured the OHJ logo house in oak.

below — Orchestra leader Stan Kurtis leaves the ballroom for a Musicale among guests. Note that the party was attended by no less a contemporary hero than H. H. Richardson (AKA Max Ferro).



The Old-House Journal®

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CALLING ALL SELECTE

In our ten years of publishing, many of our readers have alluded to "hauntings" in their letters and conversations. Yet almost all have felt a certain reluctance about detailing such experiences. So we decided to offer this opportunity for readers to tell another type of old-house story to sympathetic ears.

Space permits us to share only a few of the letters we received.

Except for the grammatical editing we give any letter (or article), we have not altered these letters in any way. You're reading just what was sent to us. We welcome further reports from our subscribers, and if enough people are interested, perhaps we'll run a second series of letters in the future.

HEN I FIRST encountered spirits in my own home, I was unnerved and also doubtful of my sanity. After all, if I was crazy enough to tackle a third restoration project in nine years, then maybe I could be crazy in other ways as well! However, time and an open mind have helped me accept and enjoy these little meetings between the past and the present; now, a home would never really be a home without these unexplainables.

IN AUGUST, 1979, we moved into a three-storey, 1857, brick Victorian to begin our third and most ambitious restoration. The structure had been built as a gracious home for a state senator, and then served as a doctor's home and office, a school superintendent's house, a restaurant, and finally for 25 years as a nursing home. It stood unattended for two years before we purchased it.

NEEDLESS TO SAY, there was (and still is) a great deal to be done. However, by September of 1979 we considered ourselves fortunate to have repaired the roof and furnace, replaced missing windows, and installed a working kitchen. Over the weekend, we had ripped out a containment wall surrounding the curved mahogany staircase in the front hallway.

THAT PARTICULAR MORNING, my husband had gone to the next town where he taught school, and I was halfheartedly contemplating painting one of the 15-foot ceilings when the phone rang. As I told my college friend of our progress, I noticed the chandelier flashing on and off through the transom over the door leading into the formal parlor. I commented to her about the odd occurrence, wondering about the competency of the electrician who had recently inspected and approved all the wiring. She, however, began to worry that someone had come in through one of the eight exterior doors and was playing a nasty trick on me. Nothing would calm her except that I go immediately to investigate, while she listened in case something truly disastrous was happening.

AS LUCK WOULD HAVE IT, the closest doorway was blocked with ladders and tools. Therefore, I took the more circuitous route through the

dining room, into an added room, and down the front hall. My two schnauzers trotted along, one on either side, as I entered the hallway. Suddenly, the door between the hall and the parlor literally flew open, as if a gust of wind had pushed it. Both dogs began to whimper and back up as very distinct, heavy footsteps came toward us. There was positively nothing to be seen, and I searched my mind for logical explanations as the dogs turned tail and deserted me. Then all logical thoughts left me as an icy air encircled me and the footsteps continued past me, to die at the doorway I'd just used. I was very shaken, but I did carefully inspect the parlor: All the windows were sealed tight and all the lights were off.

FOR SEVERAL DAYS, I was the victim of my husband's and friends' teasing about ghosts and strange noises. In fact, I was beginning to believe I'd been the victim of my own overactive imagination, when both my husband and I were awakened in the pre-dawn by the explosive sound of shattering glass--not a small tinkling, but a massive crash. With visions of tree limbs coming through the 14-foot windows on the first floor, we raced down only to find everything exactly as it should be. Then we ran back to the second floor to inspect the windows and antique mirrors; and finally to the third floor, where once again everything was intact. In the daylight, we explored the yard around the house and finally the street for broken glass. In cautious questioning, we determined that no one else in the village heard a thing. Since that time, we experience the same phenomenon two or three times a year, and have yet to find a reason for it.

THE FOOTSTEPS in the front hall continued until we removed the room that was added to the rear of it and restored the door that hung there originally. We then found ourselves listening for what had become over the months an almostpleasant sound. But upon completion of the former parlor, we found a new friend who likes to serenade us with soft, lilting tunes. If what we have since discovered is true, then perhaps the senator who built the house is back playing his beloved harpsichord as he once did for his family and friends in that very room.

PERHAPS THE MOST MEMORABLE and least explainable experience during our residence was my encounter with the barefoot boy. Once again, I'd been painting—a never-ending task, it seems! After an extended period of time, I began to wonder what had become of my husband, who had gone to the basement for "just a minute." In all honesty, I dislike the basement area intensely, with its eerily trickling spring (a Victorian luxury) and mausoleumlike silence. I loathe the thought of anyone being there for more than a few minutes.

AS I ROUNDED THE CORNER into the kitchen, a startled boy of about eight stood looking at me. He was clad in a too-large, grayish shirt and faded coveralls, and had bare, wet feet. I gasped, and he picked up an unusually cumbersome lantern and began backing toward the outside door. As he backed, he also began to fade--"fade" is the only word that describes what happened to him. At that moment, my husband burst into the kitchen, carrying a rusted lantern he had unearthed in the basement. It was identical to the one the boy had been carrying. Later, a museum curator identified it as the type of hanging oil lantern often found in churches or meeting halls, and seldom carried as it was awkward to handle and easily blown out. We can find no explanation for its being buried in the basement, unless of course some little boy did it a century ago.

LIVING IN A VILLAGE founded in 1803, where most of the buildings were erected between that time and 1900, ours is not the only home with unseen guests. And once you learn to accept these glimpses into the past as a rare favor, life in an old house becomes so much more delightful!

--Ruth Ann Dixon Old Washington, Ohio

HAVE ENJOYED reading the Journal for several years now. There are always interesting, helpful, and practical items in each issue.

THE SPIRITS of the previous inhabitants are a definite part of my 1925 house. They are a real experience for everybody who has lived in this house since I moved in in May, 1974. My daughters, my ex-wife, all my friends--they've all experienced the presence of spirits, hauntings, ghosts, memories, or whatever they are.

THEY MAKE THEMSELVES FELT mostly in audible ways: footsteps, usually on the floor above you; walking that makes the wood floors flex and creak; voices, conversation, and laughter; the sound of doors opening and closing; and knocking on doors. The sounds are usually heard when one is alone in the house, absorbed in reading or some other project; all of a sudden, you'll be distracted by something and become aware of that presence.

IT'S KIND OF SPOOKY AT TIMES, but it has never been violent, aggressive, or threatening. The voices are always of a positive tone, sometimes laughing. The sounds always come from the lived-in rooms and spaces of the house, never from the attics (there are many) or crawl-spaces. Sometimes the cats act like they sense somebody or something else in the room.

OCCASIONALLY THERE IS VISUAL EVIDENCE. Sometimes I find doors open that I'm sure were closed, lights on that I turned off, or bathroom stool covers down when I'm sure I left them up. Many times when I've heard unusual sounds, I pursue them, but most of the time there's nothing there--nothing visible. (Sometimes it's the cats up to something.)

I REALIZE that memories can be very real, and that sometimes I may be hearing things that

aren't really there. I wonder if my mind is playing games with me.

THESE OTHER INHABITANTS of the house are a normal and accepted part of our everyday life in this house. They go about their daily lives and so do we. We never really interfere or intrude on each other; just respectfully occupy the same house.

--William A. Woods, II Bremerton, Wash.

SUALLY, we keep our ghost stories to ourselves, but since you asked.... We moved into our late 1880s house two years ago. I soon began feeling as though I was being watched. I would turn quickly around but see nothing. Then my husband and I began seeing things out of the corners of our eyes. This happened independently; we didn't talk to each other about it right away.

THE FIRST WHOLE SPIRIT I SAW was a dog. I love dogs and we have two flesh-and-blood ones. The spirit dog was a medium-sized white dog with a fluffy tail. He followed me to a neighbor's house, too. There is also a tan spirit dog. I haven't seen them for a while, but they are there.

I WAS A BIT STARTLED by the elderly, thin spirit man in my daughter's room one night. It was the first impression of an entire person that I ever saw. I haven't seen him since --maybe I scared him, too.

OUR SPIRITS don't make noise or move things. I believe they stay around the house or come visit because they were happy here and like the place. There is a lot of spirit activity around holidays like Thanksgiving or Christmas, and when we begin a big renovation project. We don't mind the spirits being around. We kind of like them. They probably feel about the house the same way we do.

--Judy Lukas Chicago, I11.

WAS NEVER ONE to believe in ghosts until we rented a 1700, 13-room home. When we first moved in, my father went into the attic to check things out. There were boxes of artwork and also books in Braille. He moved all the boxes to the opposite side of the attic, so that the rain that dripped through the few holes wouldn't ruin their contents. Off from the house, we found a graveyard. Most died at thirty and younger. It was the same family.

ONE NIGHT my mother and I were sitting in the living room, when we heard the doorknob turning; first slowly, then faster. We hadn't heard any cars pull up. (The house was on a mile lane in the country.) I woke my father and we told him all about the knob turning. He checked everything out and found nothing. He said we probably imagined it and went back to bed.

WE LET IT SLIDE until a few nights later. I was up very late when my mother came in and wanted to know why I was typing so late at night. I told her I hadn't been typing and showed her that my typewriter was stored in a corner. She said it woke up her and Dad and sounded like it was in the same room. She went back to her room and it stopped.

LATER THAT WEEK, we went to my grandmother's, and my father stayed home. When we returned, he was starting to get edgy. He said that he had heard footsteps as well as the upstairs doors slamming. He had thought one of my brothers had stayed home, so he went upstairs to see but found no one. We were all gone. Things were getting spooky!

A FEW NIGHTS LATER, I was up late again when I heard something that sounded like it was coming from the attic. The next night I asked my father if he'd sent my brothers up there for anything. We questioned them, but they'd been asleep. We were using the small room with the attic hatch as storage. There were a lot of items under the door, and they hadn't been moved.

I TOLD MY PARENTS that the noise sounded like boxes being moved. (At that time, I didn't know that my father had moved them because of the leaks.) Dad took a flashlight and went up into the attic. All of the boxes were moved back to the original side. Also, he found a Braille typewriter on the side of the attic that was directly over his and Mom's room. He hadn't seen it the first time.

ALL WE LEARNED was that there had been a blind girl who lived there once. So was it a ghost? We had the landlord remove everything from the attic. We lived there ten years and heard nothing after everything was moved out. I had wished it was never moved out, because the ghost or spirit or whatever it was seemed harmless. My curiosity still gets me.

--Dorene Trego Secretary, Maryland

HE PREVIOUS CURATORS of Upper Wolfsnare Manor had informed us that there was a ghost in the house and that he had been seen by their daughter on more than one occasion. So we were not surprised when our own daughter reported that she had come home from a party in the wee hours one night to discover the ghost materialized in her bedroom. "I don't have time to deal with you now," she said tiredly, and the ghost obligingly disappeared.

I WAS CONSCIOUS of the presence of the ghost because, in the middle of a major job, tools would mysteriously disappear. After spending a great deal of time hunting for the item, I would abandon the search and either go out and buy a replacement or make do with a substitute. Weeks later the tool in question would turn up in some curious and out-of-the-way place. So now I own two claw hammers, two carpenter's rules, and identical twins of a few other assorted items.

ONE SUNDAY my wife and daughter were in the kitchen preparing lunch, two male friends were in the back yard raking grass, and I was in the upstairs study overlooking the front yard. As we gathered in the dining room for lunch, one of the young men asked me, "What was I doing wrong?" "What do you mean?" I replied. "You were looking at me through the back upstairs window so sternly, I thought that I must have been doing something wrong," he said. I told him that I hadn't been near that window. He reacted with a crestfallen, "Oh, and I see now that you're not wearing a white shirt." We all realized that he too must have seen a materialization of our curious ghost.

DURING THE CIVIL WAR, nearby Norfolk and Princess Anne County were occupied by Union forces. It's said that our house served as a garrison for the Federals. We wonder whether our ghost is the result of one of the many guerilla skirmishes that occurred in the area.

--Alan R. Taylor Virginia Beach, Va.

GHOSTS. POLTERGEIST. Our best instincts tell us that there are no such things-nevertheless, we hear and sense a presence in our old house.

WE BOUGHT THE HOUSE IN 1977. We fell in love with the large rooms, the stained glass windows and doors, the four fireplaces (plus one that's covered over to create a closet in the master bedroom), the speaking tubes, wainscotting, wood panelling, gas lights, beamed ceilings, tin roof, and verandah. The house is carefully preserved. Anything that had been removed was stored somewhere in the house. Imagine our delight when we found brass wall fixtures with cut-glass shades ready to be mounted where the previous owner had removed them. Old chandeliers, wood trim, ornate escutcheons--all were kept after they'd been removed or replaced.

THE HOUSE'S HISTORY intrigued us, too. It had been built in 1888 by the housekeeper for one of the prominent families in town. She named it "The Pines" and lived there until just before 1910. She sold it to a family who were part owners of a fresh fish business in Chicago. (It's still in business.)

NOT TOO LONG after we settled in, I began to hear the sound of footsteps going up the wooden staircase to the third floor--always between 2:45 and 3:15 AM. The sound of footsteps would awaken me at least once a week for a while. They mysteriously stopped, only to resume again after a period of time.

OUR DOG WOULD STAND at the bottom of the stairs to the third floor and whine. She refused to go up there, even if my wife would coax her. We've finished off the third floor, and our dog will go up there now, but not by herself.

ON THREE OR FOUR OCCASIONS, we would find at least one window on the third floor open, and no one in the family had opened it. The windows are held closed by two turnbuckles, and they're not easy to open. This continued even after we installed storm windows up there.

ONE OF MY SONS heard a cry for "help" when he was in the second-floor bathroom. No one was teasing him or even near that part of the house at the time. On August 30, 1978, at 3:30 AM, a high-pitched wail like that of a child awakened me. It lasted about five seconds and sounded like it came from the third floor, near the front of the house.

ON SEPT. 1, 1978, at about 4:15 AM, I heard the sound of furniture being dragged across the floor. It sounded as though it came from the second-floor sitting room, but no furniture was out of place when I investigated.

STARTING IN OCTOBER, 1979, and continuing for a couple of weeks, my wife and I were awakened by the rhythmic sound of a toy drum. The sound lasted almost two minutes and appeared to come from the third floor. Later that fall, we heard the sound of someone running on the third floor. It sounded like a child.

MY OLDER SON, who sleeps in what used to be the maid's room at the foot of the stairs to the third floor, has had several experiences. On one occasion, the hands of his alarm clock spun around. He has a frequent cold draft in his room. On several occasions, he had the sensation of someone trying to enter his body. The boy who lived in the house previously, and who had the same room as my son, claimed to have seen a young boy sitting at the top of the stairs to the third floor.

ON FEB. 18, 1982, my wife was home alone and heard a small child's voice call "Mom." The call was repeated and she thought that our daughter had come home early from school. But when she looked for our daughter, she discovered there was no one else in the house.

WE'VE HAD A LOT OF YOUNG PEOPLE come to the house for parties or to visit our kids. The ones between the ages of 15 and 20 seemed to sense something there. Our older boy's girl fainted once because she sensed a presence, and one boy who was quite artistic almost fainted as a result of feeling the presence strongly on the third floor. Some young people told us afterward that they felt as though their breath was being taken away, or that they felt very uncomfortable on the third floor.

TWO OF THE FIVE OWNERS of the house have commented to us about strange happenings in the house when they lived there. One wrote us and said her family heard sounds regularly and even experienced the breaking of dishes. We haven't had any of that. We haven't felt threatened or unwelcome. It's just as though we share the house with someone we can't see.

WHILE WE'VE LIVED HERE, the house has been predictably quiet for a length of time only during the Christmas season. We decorate a tree and put it in the front window on the third floor. All the time the tree is up, there are no sounds or awakenings.

THERE ARE STORIES that a young boy somehow connected with the house died in or near it. The stories don't identify the boy with the housekeeper, her employer, or the family that remodeled the house. Some say the child might have been the housekeeper's illegitimate son, but there is no confirmation of this.

WE FINISHED THE THIRD FLOOR during the summer of 1981. We carpeted the largest room, painted the walls, and turned it into a cozy recreation room. Since that time, the noises coming from the third floor have been substantially reduced. So we don't know whether we satisfied a restless spirit, drove him away for the most part, or are simply experiencing a longer-than-normal hiatus.

--Charles A. Goding Elmhurst, Ill.

HE RESTORATION of our old house progressed quite nicely until one of the workmen refused to come anymore. When he could be persuaded to tell us why, he said, "There is a man there and he bothers me. He walks up and down the stairs and then he goes through the rooms closing doors. And he stands behind me and watches over my shoulder while I work. I can even tell you what he looks like. He is tall--at least looking up at him, he's tall. He has a beard and wears a black suit and he gives me the creeps."

THE WORKMAN was wheedled into continuing his employment with the condition that he work only daylight hours. But even in the cold, hard light of day he played the radio so loudly that the noise of power tools was overwhelmed. Futile was my attempt to tell him that his bearded overseer was only making sure that the work was being done well.

ANOTHER MEMBER of the construction crew heard voices. We had to let him go because we could not afford him: He spent so much time trying to hear the conversations that his work just sat and waited. (A pity--he was an excellent carpenter.)

AND THEN there was our dog Gus. The day the furnace was repaired and turned on for the first time, we stayed overnight just in case something didn't function properly. Gus awakened us at 2:45 AM. We never knew he had so much hair: He bristled like a hedgehog. We watched him tiptoe to the door and enter the front hall. As he looked up the stairs, he began to growl. Now, Gus is the kind of dog who loves even the vet, but he growled and snarled as if all the instincts of his collective ancestors were coming from his throat. He was not to be coaxed from that door until, in his own good time, he retreated, slinking, to a far corner of the room and blinked until dawn. I know because I watched.

WELL, I WAS JUST ABOUT CONVINCED that we had houseguests. So, despite the scoffing of skeptics, including my spouse, I sought the services of a psychic to do a reading on the house. Knowing nothing of our previous experiences, he described the same dark-suited, bearded man and identified him as a doctor who --the deeds confirmed--had lived in the house for nearly ten years more than a century ago.

ACCORDING TO THE PSYCHIC, the doctor had taken indecent liberties with a very young local girl, and the closing of doors which bothered the workman was a symbolic attempt to hide the crime. The psychic easily found the room in

which my daughter refused to sleep. It was once occupied by a child, a girl of four or five years, who had been pushed down the stairs by her older sister. The little girl was severely crippled and very unhappy. Apparently, upon her death, she remained in the house, and it was her presence that unnerved our daughter (who, by the way, has yet to spend a night in that room).

WE HAVE BEEN LIVING in the house for two years and I love it more than ever. Yes, sometimes we hear footsteps and some rather startling thumps upstairs. Our former residents still "cook" from time to time, filling the rooms with delectable odors: pot roast, chocolate, and, quite often, coffee. The doctor has been seen twice, both times standing in the bathroom. Maybe I'll stay here forever, just because I'm so happy here now. Maybe ... my husband is walking through the dining room, a rather sheepish grin on his face. He says, "They are cooking bacon and eggs."

-- Name and address withheld by request

HEN I READ your request for true ghost stories, I was disappointed because I had no story to tell of our 1892 house. The neighborhood children had told us that there was a ghost in our house and that it had been seen by previous owners. But we had no concrete evidence of its being with us. True, our youngest daughter swore someone was always moving her things about in her room, and once when my husband was alone, listening to music with headphones on, someone tapped him sharply on the back.

ABOUT TWO WEEKS AGO, my husband Don was told a story that others might not believe; we do. Don was talking to Marty, the 17-year-old son of our friends. He asked Don if we had an old man living with us. The boy described the man's physical appearance and the following sequence of events: Marty had come to our house on a Saturday afternoon to help Don with some basement work. Don was finishing piano lessons with one of his students, so Marty sat in our television room and waited. This room is adjacent to the living room, which is totally visible from the television room.

ACCORDING TO THE BOY, while he was watching television, he became aware that an old man was sitting in a chair at the far end of our living room. The man was dressed in "old-fashioned clothes"--pants that buttoned below the knee. He sat there for a short time, then got up and went over to the fireplace and began taking measurements with a folding wooden ruler. He then walked into our dining room and was not seen again. The boy was so scared that he didn't tell anyone about this--he thought people would think he was imagining things.

WE ARE CONVINCED our ghost is a previous owner who did some wonderful remodeling to our house: a solarium full of beveled, leaded-glass windows; the sandstone, hand-carved fireplace mantel and surround; and an eight-ft. addition to the south side of the house. (We now have a 30-ft.-long living room.)

LAST SUNDAY we decided to rearrange the furniture in the living room. After much debate and measuring here and there, we both said, "Where is he when we need him?"

--Joan E. Harrold Massillon, Ohio

I'S BEEN A WHILE since we've heard from "Charles." Friends tell us it's because he's happy now that his home is restored to its former glory.

CHARLES FELL BACKWARDS off the huge 11-foot retaining wall that holds up our 1892 Queen Anne. He was a prominent dentist and got quite a write-up in the local newspaper as he lingered for seven days. Dr. Charles O. Perkins "crossed over the river of death" on August 17, 1901.

WE BOUGHT THE HOUSE IN 1976, and it was in a very sad state. It had five apartments and was on the border of being condemned. Charles soon made himself known. On a night when the house was empty of its tenants, he made a noisy debut. The kitchen stove legs rattled, the closet door opened and closed, the lights went on and off, his actual presence was felt in the room, and my husband Richard was cut off repeatedly as he frantically telephoned a friend. With all this commotion going on, Richard made a rapid exit.

THE NEXT DAY, at the suggestion of a friend, Richard read a Reader's Digest article about ghosts, especially poltergeist. He returned with renewed spirits and hoped to communicate with Charles. Charles was a bit tamer after that. For a period of three years, we heard Charles literally bumping around the house. Occasionally, something would fly across the room. Throughout this time, neither Richard nor I felt fear; only curiosity.

THE ONLY VARIANCE in bumps and bangs occurred one stormy night. I heard an intense conversation between a man and a woman going on outside my bedroom door. I couldn't make out any specific words, but I felt it was a serious matter they were discussing. When I went out into the hall, the talking stopped: when I went back into my bedroom, it started again. The conversation seemed to come from up high, under the skylight of our staircase. I repeatedly looked out and up in the hall and found nothing. Again, my main sensation was curiosity, not fear; I felt very safe.

AS WE HAVE RESTORED our Victorian--taking out the awful apartments, rewiring, roofing, plumbing, landscaping, scraping, painting, and wall-papering--Charles has disappeared into the woodwork. When friends ask us how he is, we say, "Fine," knowing that he probably is. His beautiful home, which he had built so long ago, is a landmark in the town. We really miss him and hope to meet again--another time, another place.

-- Joleen Colombo Petaluma, Cal. FOUND MY OLD HOUSE IN 1973, and so all ten years of The Old-House Journal are on my book shelves. My house is a rather plain example of the Queen Anne style, built in 1903 by a practical man, who gave it very few flourishes. However, it remains almost unchanged and so authentic that it has been a delight to restore. Before we moved in, we only had to give it a good cleaning; we planned to live around our restoration projects.

THE FIRST "unexplainable" occurrence came during one of those early days of heavy-duty cleaning. I was in the cellar, sweeping up the stucco particles that had fallen from the sandstone walls, and coughing from the soot that had accumulated from years of burning coal. I was completely absorbed in my task, and unaware that we had worked almost through the night. My husband Terry was washing walls on the first floor. It was the shrillness of his voice calling for me that caused me to rush upstairs.

HE WAS IN THE SITTING ROOM, off the parlor. He had been on a ladder, washing the ceiling fixture, when a soft voice, one that he mistook for mine, had spoken his name. He said the voice had come from directly behind him, almost at the level of his ear--while I had been down a flight of stairs and working in a far corner of the cellar.

WE WERE BOTH very tired and decided to leave our chores until the next day. Before we left for our apartment, I went upstairs to take one quick look at the little bedroom. We had fixed it up and furnished it before any other, just so that one room would seem homey in the chaos of moving. I found the ruffled curtains, braided rug, and antique furniture very reassuring, and I took the time to straighten the crazy quilt on the bed before I left.

WE DIDN'T RETURN until late into the next afternoon. As Terry carried in cartons, I went upstairs to set my prettiest house plants around the little bedroom. The crazy quilt, smoothed ten hours earlier, was rumpled, and the bed pillow bore the indentation of a sleeper's head.

TO BE VERY TRUTHFUL, I was delighted at the thought of owning a "haunted" house. It was going to make terrific conversation at the house warming! The sitting room, where the voice was heard, temporarily became an antique shop. About five years later, I found myself alone here, and the shop was closed. I moved my bedroom to that room, as I didn't like sleeping upstairs anymore. We hadn't decorated or papered the sitting room, because it was a constantly changing arrangement of furniture, pictures, periods, and designs. It was dingy without the clutter, and my beautiful Victorian bedroom set made it look that much worse by comparison. I didn't sleep very well the first few weeks.

MY MOTHER CAME to spend the holidays with me. We shared my bed and slept without a problem. Two nights after she left, I saw my ghost. I awakened from the restless sleep that I'd become used to, and saw the figure of a woman approaching me from the end of my bed. She was slender and appeared taller than she was as her hair was piled up and fluffed. She

wore a long, loose-fitting dress with no color to it. Her face was plain and expressionless.

MY REACTION was not that of a cool, scientific observer, as I had always imagined it would be. All I felt was absolute terror. I called out, "Mother? Mother?" in confusion, as though it was her and nothing else. I did manage to look away to check my dogs. They were sleeping on my bed, as usual. I even reached out and touched the nearest; the physical contact with his fur proved to me that I was really awake. But neither he nor the other was sharing my experience (as many authorities say they are supposed to).

THE FIGURE GLIDED rather than walked as it came forward. It even seemed to pass partially through the footboard of my bed, as though it did not exist for it. Meanwhile, I kept repeating "Mother! Mother!" over and over, like a frightened child, until the apparition dissolved at the door leading to the parlor.

I SENSED ITS PRESENCE one more time a few nights later, but would not open my eyes to see if it was there. I decided that sleeping upstairs wasn't so bad after all, and the sitting room became my TV room, now cheerfully papered and furnished with the only furniture in the house which is not antique. Nothing has distubed me since.

IN 1981, I BEGAN to look into the background of my house. I followed OHJ's advice and talked with neighbors and relatives of the original builder. A surviving daughter of the family that lived there until 1945 was kind enough to correspond with me. She even sent me photos from her family album. The woman in the picture below, taken in 1916, was her sister Gertrude. She went to South Dakota shortly after it was taken and died there giving birth to a son. The boy was sent back to Ohio to live with his grandparents.

HIS GRANDFATHER was the depot sergeant for Penn-Central. The old depot, now restored, is still standing just across the street. The boy went to work for the railroad, too, but was killed when still a young man in a freak accident. He was a switchman and was run down by a train while changing the track-about 30 miles from here, on the same tracks that I can



see from my windows. He slept on an old iron bed, one which I thought had belonged to the people from whom we purchased the house, but which actually has been against the wall in the little bedroom upstairs for at least 60 years.

HIS MOTHER and I have met. I wonder if Gertrude was wearing the same loose summer dress seen in her picture the night she paid me a visit.

--Roberta Schwimmer Olmsted Falls, Ohio



On these pages, we continue with "the things we've always wanted to run." Ghost stories were one such delicious indulgence; valentines are another.

I make a face when I read lovey-dovey reader letters in other magazines. They seem so selfcongratulatory. Just because we don't choose to print our nice letters doesn't mean we don't get any,

print our nice letters doesn't mean we

Dear Editor,

After reading your editorial in the June issue, I was inspired to share a recent project at our old house. We have enjoyed your Journal immensely since subscribing in 1979.

In the summer of '79, my wife and I purchased a turn-of-the-century farmhouse, a tri-gabled



ell, that sits on a bank above the Niagara River, commanding a view of the lower river and the Canadian border. Though the view has always been spectacular, the condition of the house was dismal; one friend suggested it was terminal. I was overcome by a tremendous sense of not knowing where or how to begin. Fortunately, an acquaintance recommended your Journal and we have been subscribers and avid readers ever since. While your Journal has been enlightening in more ways than I can enumerate, I think the most relevant articles so far have been those related to porch work:

"In Praise of Porches," August 1981
"Restoring Crumbling Porches," October 1981
"Exterior Wood Columns," October 1982

As our house is endowed with three porches, I have been able to put these articles to good use. Porch restoration was not initially high on our list of priorities; then, during an outdoor gathering, we noticed a tremendous sag and wobble in the middle of the porch floor. The rot and deterioration were incredible. We filled two dumpsters with demolition debris.

All floor joists were replaced with pressure-treated lumber; the crawlspace was vented with thermally controlled louvers. Floorboards were treated with preservative and back-primed before installation. The porch ceiling was jacked up and braced, removing a prominent sag. Columns were removed to my workshop, where rotted wood

however. And I confess — I've always wanted to publish them.

In the June 1983 issue, I unabashedly asked for uplifting correspondence as an anniversary present. Here are some awfully nice letters, confirming my belief that OHJ subscribers are terrific people.

- Patricia Poore

was eliminated. A new column was milled from yellow pine, as the originals had been. The porch railing was milled in my shop to the exact specifications of the original railing.

I suspect that the carpenter who constructed the first porch would have difficulty distinguishing his work from ours.



We still have a considerable amount of work to do. But at least we can sit on our front porch now, enjoy a Canadian sunset, and not worry about falling through the floor.

> -- John D. Greene, M.D. Lewiston, New York

Joan Knox Richmond, Indiana

To all of you at OHJ,

The mongoose story [July] made my day;

And I've tried for a month to condense
what OHJ has meant to me ... so I will

You gave us CONFIDENCE that we
Can actually do it ourselves.

Would never have been tackled without the

Register after completion.

Joleen Colombo Petaluma, California

"Why I Love Old-House Journal"

Old-House Journal made a direct contribution to the beautiful process of falling in love.

I rented a small apartment in a lovely Victorian in Petaluma. Richard was my landlord; he was in the midst of the crummy part of restoration (fountation work, roofing, plumbing, and taking out remuddled apartments put in in the 'forties).

As we developed a friendship getting more and more romantic, he gave me all the back issues of OHJ to read, complete in their binders.

Naturally many women in love will do strange things to further a relationship. But I want you to know that I thoroughly enjoyed reading all the issues, especially the "Old-House Living" articles. Through reading OHJ, I came to understand the respect due old houses, and Richard's dedication, and the long hard process of restoration -- absolutely worth it in the end.

We've been married five years now and are at the cosmetic stage of restoration (paint and wallpaper). The Journal has been our guide all the way and we appreciate your practical help and of course your great sense of humor.

Dear Old-Housers,

I've been meaning to thank you for the answer to one of our house problems.

When we bought our house (1870, owner-built, in the same family for 110 years until the last grandchild went into a nursing home), one thing that depressed me was the dark kitchen. The wallpaper (1950?) was black and greasy; the ceiling was painted tan (to bring down the 8½-foot height?); the woodwork was dark brown, what many people think of as "typically Victorian."

Fortunately, some of the other woodwork in the house -- behind doors, inside closets -- was a warm medium brown, with a grained pattern. We speculated that the kitchen had once looked like that, but wondered what we could do short of stripping the entire finish. We strongly suspected that the wood itself was whatever had been cheapest. (Even the studs in the walls have bark on one side.) Stripping the graining would have left us with nondescript wood and no alternative but to paint.

We were delighted, therefore, to read your articles on refinishing woodwork. Based on those articles, we made an educated guess that the top layers were shellac. We tried using denatured alcohol to dissolve it -- and it worked! Many quarts of alcohol and many bags of rags later, we have removed most of the shellac, revealing the wonderful graining. We've begun refinishing with a single coat of orange shellac to restore a lovely honey color. (Our main difficulty was convincing the hardware store clerks that we really did want to use shellac again, not polyurethane -- both for the color and so that someone else can repeat the process fifty years hence.)

Thanks again for helping save our kitchen.

-- Elizabeth Cazden and Richard Kleinschmidt Manchester, N. H.

Dear Old-House Journal,

I'm usually too slow to participate in any of your write-ins. But this time I feel I must. I really look forward to receiving OHJ every month. I want to tell you what I like.

First, it's lovely. Please don't go slick. I can get along without color pictures -- and the inevitable effect of slickness is hype. Which you are gloriously free of, for now.

Second, you promote good taste and careful workmanship. Some of the things I see elsewhere make me cringe, but I know I'll never see them in OHJ.

Third, you lift my spirits. We are surrounded by people who buy old houses and fix them all up in a few months. Actually, they pay someone else to fix them all up quickly. This can be really depressing, especially when they even get in the paper. We can't afford to do that, and I don't think we would even if we could. In the years we've lived here, our ideas have changed a lot. We've learned more about the house and discovered more appropriate ways to do things -- which would never have happened if we'd finished the house in months.

But it takes so long, and sometimes it's hard and worrisome. So it really helps to see what others have done in their own homes.

Fourth, I'm always interested in what other people have found. For example, your survey of attitudes toward polyurethane varnish amazed me. ["Picking A Floor Finish," May 1981] Readers felt it was inflexible and tended to separate from the wood. I find it very flexible and durable. My husband says this difference of opinion is based on technique. Not many people are prepared to do a floor my way, I guess. (Scrape, don't sand. Follow with six or seven very thin coats of urethane, put on every 12 hours and sanded after every other one. Wipe with a tack rag before applying each coat. I sometimes rebrush a coat to get rid of tiny bubbles.)

Probably it would separate if I were less fanatical ... maybe it's more than seven coats, I lose count. And of course you have to be aware that the stuff stays soft for six months or a year, until it's completely cured.

Happy Anniversary with love.

-- Kathe Bottero Corvallis, Oregon Dear Ms. Poore.

Has OHJ helped us through some of our darkest hours? Well, trying to work in an American Foursquare with boarded windows and no electricity was pretty dark. So maybe this story will qualify.

One of the first steps in fixing up our house was to replace the windows, all of which had been vandalized. The new ones, special-ordered from a local lumberyard, arrived just in time for spring. We hauled the windows to my in-laws'; their place is only a few miles from ours and is complete with electricity and running water. The windows awaited staining, painting, and varnishing there.

Each window was panes-takingly taped for the primer and two coats of paint. Tim, my husband and job coordinator, lined the windows up in the yard, so that the scene greatly resembled Arlington National Cemetery from a distance. We then proceeded to crawl between them with paint-brushes and cans, blowing off grass and bugs as we painted.

The hardest part was finishing the insides with polyurethane. It was a real trick to find enough space so the windows wouldn't stick to each other but also wouldn't attract blowing particles. We finally leaned them against every immobile thing in the three-car garage. Everyone was gone so we had lots of room.



Tim and I were hunched over our sawhorses diligently working, when we heard the crunching of gravel in the driveway. A mechanical cranking and whirring noise came next, followed by "**#%*@! -- THE WINDOWS" from Tim and me. With speed I thought neither of us was capable of, we rushed to the windows leaning against the garage doors operated by the remote control in my mother-in-law's car.

As the doors rose, Mother, with no idea what was taking place inside, was greeted by the sight of us trying to balance <u>seven</u> freshly painted windows on our hands, feet, and chins without smearing the new coat of polyurethane.

The windows are now being installed. I'm sure there will be more problems and near-catastrophes, but we're eagerly working toward a finished product like those we see in OHJ.

> -- Sheryl Connell El Dorado, Kansas

Dear Friends at the OHJ,

OHJ has opened our eyes and made us realize that something can be done besides modernizing. In 1976, we bought a 1916 house which was in sad shape, having seen many owners and hard abuse. We repaired and repainted endlessly, and learned to love old homes by living in one.

By 1979, we were ready to move on to the house we'd always wanted, a 1908 Colonial Revival. It was in much better shape and had been owned by the same family for 56 years.



We've repainted the exterior, repaired one chimney, and reroofed both front and back porches, but nothing major was wrong with the house. The interior is in fine shape and virtually unchanged except for a cistern water system that has been dismantled.

By following the OHJ premise, we've realized that new is not always better and that a deep, satisfying feeling can come from cherishing an

old house. You've made us aware of the dignity an old house possesses. Each in our own way, we homeowners help preserve these older structures. With love and care, they'll outlast us all.

> -- Valorie Fauquier Warsaw, Missouri

(That's Ms. Fauguier's daughter in front of their half-painted house.)

Wm. Ward Bucher Bucher & Cope, Washington, DC

Dear OHJ,

How do I love thee? Let me count the ways:

1. You're short enough to read while 2. You are fun.

3. You get into the details, showing exactly how and why to do things. 4. You are not predictable.
5. You are able to reach the most

important people - those who are making changes in their houses.

6. You teach me amazing & arcane things. 7. You have lots of pictures.

8. You have a beautiful and voluptuous editor and a dashing publisher. Until our next meeting at the

mailbox, I remain your devoted servant.

Drawing Strength From Each Other

When you tell us about the falling plaster, it helps us make better issues.

PATRICIA POORE and I are each taking a page in this 10th Anniversary Issue for some "family talk." I'd like to share with you some highly personal observations on what it has meant to be associated with The Old-House Journal--and thousands of old-house lovers.

MY FIRST THOUGHT was to dwell on the numbers, such as the growth from 3 subscribers for our October 1973 issue to the 75,000 we have today. Or the numerous awards the OHJ has received from organizations such as The National Trust and The Historic House Association. However, the numbers, gratifying as they are, don't sum up the significance of those first 10 years. But if the numbers don't capture the essence, what does?

AS I WAS GRAPPLING with that question, my eye wandered to a letter lying on my desk. I realized that was it! That's what these 10 years have been all about. The letter, from a woman in Gouldsboro, Maine, wasn't out of the ordinary. We get hundreds like it each year. That's what makes it so typical of The Old-House Journal experience. Ruth Whitehead-Aston wrote to share with us some of her feelings and experiences while rehabilitating the 150-year-old building in which she has a store. Her letter says in part:

"...I'm getting too old to be painting the outside of buildings (this is the fourth one I've saved). But professional painters are too expensive. My husband says it's not dignified for me to be thus engaged on the main street of town. But during this project I've once again had the incredible satisfaction of coming to know intimately this dear old lady by touching every plane on her face. I know how the builder put together the lovely trim, and how he blended mouldings together in a way that's as much an art form as a symphony.

"It's surprising that, after 150 years, I can still find mouldings that closely approximate the originals. It takes patience, and lots of phone calls to lumberyards. But I've found that these items are NOT irreplaceable (as I've been advised by numerous carpenters and people in town)."

RUTH'S LETTER provides eloquent, first-person testimony to what these first 10 years have meant. It's vastly rewarding to hear about the impact that The Old-House Journal has had on

cities and towns across America. Here we see a woman, invigorated in part by the inspiration she's gotten from OHJ, doing a lot of extra work to preserve her old building--against the advice of people who "know better."

ALSO GRATIFYING was Ruth's assumption that she could write to OHJ as a friend, even though she had never met any of us. She felt we would understand her passion, when those around her didn't.

BUT BEYOND making me feel good, Ruth's letter also had an energizing effect on me. And believe me, at the OHJ we need inspiration and energy, too. We're continually striving to improve the quality of the information we collect, and the way we present it. That often involves some very long work-weeks, and at times, one does get weary. When I'm having a "down" period, I have thought to myself: "Is it worth all this effort?"

RUTH'S LETTER--and the many hundreds like itmake me realize that, yes, it is worth it. The
hard work is making a difference; the OHJ is
filling a critical need for many people and
the results are there for all to see. The
OHJ is the only periodical putting out practical how-to information along with the inspiration--the reasons WHY you should take extra
care to do it right. Extra care requires
extra work, which can get tiring. Is there a
single old-house person who hasn't asked at
least once: "Is it worth all this effort?" And
that's where the OHJ comes in. So many of you
have told us how The Journal has picked you up
when you were feeling down.

THESE 10 YEARS have been a real give-and-take. The OHJ has been giving out information and inspiration with each issue. That has provided thousands of you with the stamina you need to take responsible care of your own particular corner of the world. And you, in turn, through your letters have kept our batteries charged so that we can keep the issues coming. It's sort of preservation's renewable energy cycle.

AMERICA LOOKS BETTER today than it would have if the OHJ hadn't been publishing for 10 years. We know this because you have told us so. That makes us feel good--and gives us the vitality we'll need for the next 10 years!

Clam Labino

Please Don't Call Me A Preservationist!

EING LABELLED a preservationist is, I suppose, an occupational hazard. After all. it's the discipline with which we're most closely allied. But besides resenting being so neatly pigeonholed, I think the label sounds formal and rigid. I have met some card-carrying preservationists who are indeed rigid and VERY doctrinaire in their approach to what's right and wrong in old-house work.

PURISTS WHO FEEL that The Journal is too lax in spreading Preservation Doctrine will pounce on this page: "Aha! I knew it." On the other hand, people who think we're too pure may be in for a surprise. I'm a survivor of countless house tours; I've paraded through dozens of neighborhoods, historic and otherwise. And I've developed some personal biases. Idiosyncracies, actually. I will freely confess to a few of them here, so you can see that I'm not a preservationist ... at least not with a capital "P."

I Like The 'Before' Pictures Better.

I have a perverse love of old buildings with all their age spots intact, untouched by restorer's hands. When people take me through a half-finished house, they apologize for "the mess," meaning everything that's not restored yet. I protest, "Oh no, I like the mess best," and I really mean it.

MY QUIRK extends to neighborhoods as well. An

undiscovered enclave of taken-for-granted old buildings occupied by unself-conscious people is more my cup of tea than a neighborhood that's arrived at chic.

IS IT the sense of discovery I like? Am I vaguely uncomfortable with the possibility of wholesale restoration obliterating the marks of character? Am I turned off by the threat of too many real estate speculators, useless boutiques, and a lot of

tourists eating ice cream cones? Probably a little of each. But I'm also willing to admit to an odd personal attraction for the smell of age, floors that slope, and the cracks in

ancient plaster.

I Like Old Houses Painted White With Green Shutters.

Character.

Once upon a time, all old houses were painted white regardless of their vintage or size. That was a shame, not so much because it wasn't historically appropriate, but because a threestory Queen Anne tower house painted all white looks hulking and pallid. Color it in, and the same house arrests passersby with a display of texture, bold asymmetry, and endless detail.

THE WHOLE COUNTRY is awakening to the creative possibilities of the Victorian palette. But there are alarming signs that some people are going too far. The herd instinct that once had all old houses cloaked in white now declares that every house should be a symphony of color. This mentality looks at an old white farmhouse and proclaims it hopelessly inappropriate.

SOME OLD HOUSES take very well to the new suit of clothes. Others, because of humble beginnings or condition or location, look overdone. And the old white house with bottle-green shutters has undeniable symbolism: It's grandma's farm, it's comfortable, homey, and unassuming.

I Get Bored Just Saving The Past For The Future. What About Now?

res, we should preserve good old work. And yes, we should respect the intention of the original builders. But the purists would have us freeze time and the purists would have us freeze time, and turn our dwellings into museums. They forget that these houses were built by people who had everyday concerns with economy, comfort, and function -- just as today.

I RECENTLY received a story from sensitive sub-

scribers who went a step further than most. added murals -- handpainted murals all over the place. The work is good, and 100 years hence someone will be preserving every square inch. Yet I know that inch. when I run the story, some people will object to work that was done without "documentation." It never existed before, a few purists will sniff, so where do they get off creating it now?

WHAT MAKES preservation-

ists think that history has ended? Why can't we make some history, too? I say educate yourself, consider the long run, then give it your best shot. Authentic restoration is fun and great intellectual exercise. But it's not morally superior to doing your own good work.

Keep on having fun

Satricia Jooce

Restorer's Notebook



The OHJ Staff wants to share some of our favorite tips this month.

What I Do With Diapers

YOU SAVE HUNDREDS OF RAGS, it seems, but when you need one, all you find is polyester blends and scraps with the buttons still attached,

right? I could never find a could never find a could never find a I learned about used diapers.

You can buy soft, absorbent, clean old diapers by the pound! Just call a diaper or linen service; they're happy to unload old ones at a fair price. Some of these places will also sell you the con-

tinuous-loop hand towels found in public rest rooms. From now on, all your rags can be cotton -- neatly folded in the closet.

"Hasn't Scratched Yet"

JUST A FEW BLOCKS from the OHJ offices stands a remarkable Jacobean Revival building, ca. 1903, built by the heir to the Bon Ami fortune. Bon Ami Cleaning Powder was itself introduced in 1886. But history has nothing to do with why we swear by Bon Ami.

Ironically, it's a much better product than new-improved cleansers such as Ajax and Comet. Its superiority is quite simple. Bon Ami scrubs with crushed feldspar, a more expensive but much softer abrasive. The others contain silica -- it's like sandpapering

your fixtures.

Bon Ami's old-fashioned Cleaning Powder comes in a container that looks like a baking-soda tin; it's

a soap, and has no bleach. Bon Ami Polishing Cleanser, in the common cylinder can, is also non-abrasive but contains oxygen bleach (instead of smelly chlorine bleach).

The Cleaning Powder will not leave a chemical residue. For this reason, sign painters favor Bon Ami for cleaning glass in preparation for gilding or painting -- nothing left behind to interfere with bonding.

WHILE WE'RE AT IT, here's another versatile around-the-house substance: rubber-cement thinner. It's not something you want to breathe in a closed space. But it's a great universal solvent for anything greasy, gummy, or sticky -- and it's so volatile, it leaves no residue. Look for it at art supply, office supply, and hobby stores. (Hint to graphic arts people: It also dissolves graphite, leaving no residue to keep drafting tape from sticking.)

The Poores

Linseed Oil Saves Sash

I GAVE THIS FORMULA for restoring badly weathered window sash in a very early issue of OHJ. It is my all-time favorite hint -- cheap, easy, and it really works. I've used it on countless windows in my house. But nobody around here ever realized how truly wonderful a tip it was until we used the process on some windows here at the office. The Editor thought I'd used some high-tech impregnant!

You know the problem: The bottom rails on window sash, and the sills, don't hold paint because of moisture. Rainwater and condensation are the nearly unavoidable culprits.

Sealing the wood with linseed oil before repainting greatly retards paint-peeling. First, mix ½ cup of boiled linseed oil and ½ cup of paint thinner. After scraping all loose paint from the wood, liberally brush on the linseed-oil mixture. Allow the oil to dry at least 24 hours, then repeat the process. Very weathered wood requires a third application.

After that last application, allow at least three days for the oil to dry thoroughly. Then lightly sand the sash, and prime with an alkyd primer. You can use an alkyd or latex paint for the finish coat.

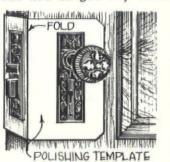
Formerly scabby-looking windows treated this way have held paint ten years in places that used to start peeling after twelve months.

Clan Jabins

Beware Brass-Cleaner Damage

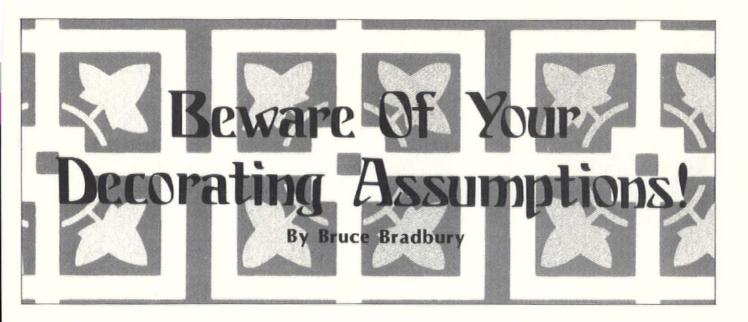
METAL CLEANERS and polishes are damaging to wood finishes. You have to be especially careful not to get any brass polish on grained

woodwork when you're cleaning the doorknobs and latches.



I've made templates out of oaktag (light card-board) to go around brass hardware that I polish often. Each template fits snugly around the door plate or handle or what-haveyou. Make the template when you've got the hardware disassembled

for restoration or a paint job. If you don't want to remove the hardware, you can make the template by tracing half the outline and then flopping it to make a whole pattern as you transfer it to the cardboard.



F A "REMUDDLING OF THE MONTH" award were given for interiors, many of us would be unwitting candidates. The same owners who tirelessly strip asbestos siding from their facades and painstakingly replace the original ornamentation often treat the insides of their historic homes with modernist vengeance, obliterating the harmonious proportions of their interiors with a swath of white paint. Although the Victorians had a well-earned reputation for excess, they did manage to create a sophisticated and highly personal form of interior ornamentation that was spe-cifically suited to the proportions of their homes. Few of us would care to go back and live in a total museum environment. But a closer examination of basic techniques of Victorian wall and ceiling decoration reveals some appealing period effects that may be successfully adapted to the twentieth-century renovation.

THE GREAT HURDLES to be faced are not so much technical, as in exterior restoration, but rather psychological, as nearly all of us carry around a subconscious bundle of misconceptions about the Victorian interior.

The World Of Black & White

OST OF US HAVE SEEN the 19th-century world primarily through the medium of photographs, where the richness and subtlety of color that characterized its interiors is lost in a world of black and white. A cornice that in an old photograph appears to be a single color may instead contain as many as ten subtle variations in hue and shade. A door and its surrounding moulding may have up to thirteeen closely balanced colors, threaded with pinstripes of vermillion or metallic gold. Ceilings that we would assume to be white may well have been soft, hazy shades of blue or a pale salmon.

THERE IS A WHOLE WORLD of 19th-century color long lost and forgotten. What color impressions we do have of the Victorian era often come from the strange and unlikely sources that follow.

Hollywood Hype

ROBABLY NO OTHER SOURCE has influenced our impressions of 19th-century color so strongly and so insidiously as the innumerable interiors we have seen, since early youth, in the movies (and more recently, television), subliminally creating the impression that the Victorian interior was one great unrelieved expanse of red flock wallpaper. Red flock as the hallmark of the Golden West (or East, for that matter), is pure Hollywood fiction.

RED PHOTOGRAPHS WELL, which is one reason why red flock became a set designer's staple, and the flocked damask patterns were available in the 20th century long after more typical Victorian wall-covering had ceased to be produced. Flocked wallcoverings date back at least to the 16th century and were certainly available in Victorian times, but in many years of examining old Western interiors, I've yet to discover a red flock wall-paper that predates 1950 in a private residence or even in a saloon.

A Visit To Madam Kitty's

ARALLEL TO THE RED FLOCK fiction runs the strangest Hollywood-inspired decorative phenomenon of all. An incredible number of otherwise sensible Americans feel, though they have never set foot in a whorehouse, that to be 'authentic' the parlors of Victorian homes should in some way resemble one. How do we 'know' what Victorian whorehouses really looked like? Hollywood! This is a somewhat cruel fiction, as the actual whorehouses in most Western towns were far more comparable to stables than to the elaborate palaces of pleasure, run by big-hearted ladies of the night, that were created by the Hollywood dream machine.

Modern Myths

IXED WITH OUR BAG of Hollywood fantasies is an equally powerful set of myths, brought to us courtesy of the Modern Movement (1916-1980). So ingrained are these beliefs that we

seldom see them for what they really are: the popular prejudice of our own era. Three myths:

1) "Painting a small room white will make it seem larger." Nonsense. Paint a small room white, you have a small, white room. Paint it blue, you have a small, blue room. Ornament it and you'll have a small, but interesting room.

2) "A room with poor natural lighting should be painted white to lighten it." This comes under the heading of half truth. White paint will re-

flect more light, but if the room is still too dark for reading or normal activity, what advantage have these dingy, white walls given you? If artificial illumination is necessary, take advantage of it with deep, rich colors and gilded accents that will glow when the lights are on. This is especially applicable to dining rooms and other spaces that are predominate ly used in evening hours. Some Oueen Anne stairhalls are purposely built to be seen in subdued light, with stained glass windows illuminating a dark and rich passageway between better lit living areas.

"Too many patterns and colors will look busy."
'Busy' is the ultimate modernist buzzword, hurled like a weapon at any challenge to 'modern' ideas. Any poorly designed pattern or inharmonious combination of colors can look 'busy,' i.e., not in repose, but innumerable patterns and a multitude of colors can be combined in complete harmony. An excellent example is Louis Sullivan's ceiling for the Chicago Stock Exchange, where each of many bands of ornament contain up to 52 colors, but resolves into a harmonious whole.

WITH MODERNISM generally accepted to be a dying phenomenon, it's about time that we, as individuals, began freeing ourselves from some of its more oldfashioned and restrictive tenets.

was always the preferred color for pigsties and lavatories, but rarely until the 1890s did it play a major role in the interior. Notable exceptions would be off-white and gilt rooms done in imitation of the French style, and the use of white on unadorned, low ceilings.

COMMON CEILING COLORS were hazy blues (reminiscent of summer skies), light ochres, salmons, creams, gray-greens, or all of these colors in quiet combination. From the 1880s through 1910, wallpapered ceilings were in vogue, often con-

sisting of light backof gaslight.

grounds and patterns picked out in reflective mica or gilt, which would shimmer under the flicker

A GLOSSARY OF ORNAMENTATION

Border: A decorative band of ornament. In the domestic interior, usually 9 in. or less in height.

Corner Fans: Designs that radiate inward from the corner of a ceiling decoration.

Cornice: The moulding at the top of the walls of a room, usually made of plaster or wood, between the walls and the ceiling.

Cove or Coving: A concave moulding or curved surface forming a junction between the walls and ceiling.

Crown Decoration: An encircling band of ornament that unites wall and ceiling as one decorative whole. Usually includes picture rail, frieze, cornice, and enrichment area.

Dado: The lower portion of the wall of a room, decorated differently from the upper section. When made of wood, it's usually called a wainscot.

Dado Rail: A railing of wood, wallpaper border, or stencilled band that separates the dado from the upper wall. Wooden rails were intended to protect wall surface from damage when chairs were placed around the walls, hence it's often called a chair rail.

Decoupage: Technique of decorating a surface with paper

Enrichment: A pattern, often a small geometric, richer in coloring than would normally be used on a full wall. May be used as a dado, in wall panels, to ornament coving, or as a ceiling filling.

Filling: 1) The main portion of a wall between the dado and frieze. 2) Any wall or ceiling portion between two borders.

Frieze: A decorative horizontal band along the upper part of a wall or the design intended for such a space.

Hue: The dimension of color as it moves through the spectrum — red, orange, yellow, green, etc. (See also Shade.)

Picture Rail: A moulding (often 18 in. below the cornice) from which framed pictures could be suspended without damaging the wall surface.

Plate Rail: A broad, shelf-like moulding sometimes located below the picture rail, but often used in place of it. Top of the shelf is grooved to hold decorative plates.

Polychrome: Decorate in many or various colors, from the Greek - poly = many, chrome = color.

Shade: The dimension of color as it moves from light to dark, i.e., pink to red to burgundy. (See also Hue.)

Wainscot: See Dado.

The Fugitives

ANY COLORS AND DYES, including those used for wallpaper, paint, and fabric, are fugitive. Meaning they fade or change over a period of time, usually due to exposure to light or damp. The metallic pigments so commonly used to enrich the 19th-century interior tend to tarnish to a shiny black. Next time you strip from your walls a livercolored wallpaper covered with what appear to be black fly specks, realize that you are probably looking at a former pattern of crimson scattered with gilt.

MUCH OF THE NOTION that Victorian interiors were ugly and gloomy stems from the fact that most 19th-century interiors that remain intact are merely chromatic ghosts of their former selves. Wallpapers and fabrics are especially prone to strange changes as the more fugitive pigments fade and the more permanent ones remain. For example, a green composed of a permanent blue and fugitiv yellow will slowly over the years change to blue as the yellow disappears from it. Imagine the havoc this plays with the subtle color combinations for which the Victorians should be famous.

Pigsties And Lavatories

PROPER VICTORIAN viewing a contemporary renovation would undoubtedly be shocked by the common appearance of white walls and ceilings. To the Victorian eye, white represented finished plaster, and to leave a room white would indicate that the owner had ex-hausted his financial means or that the rooms were intended to be rented to transients.

A SIMPLER CHROMATIC CULPRIT is dirt and grime, which build up over the years on walls and ceilings. A soft artist's eraser can help remove dirt layers to give a better impression of original colors. Good places to search for original fragments of decoration, unaltered by light: behind mouldings and wainscots, under seams in wallpaper and fabric, behind heavy furniture pieces, and in closets. Keep an eye out for wallpaper rolls in attics, where extra rolls were usually kept for future repairs.



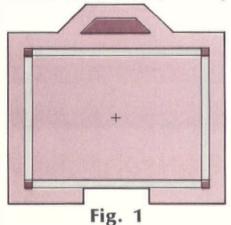
This elegant 1880s bedroom from Portland, Oregon, features a crown decoration that begins with a wallpaper frieze and polychromed cornice. The ceiling enrichment area is divided into two sections. The section nearest the cornice is finished with flat paint and embellished with pinstriping; the further section consists of wallpaper borders with accom-

panying corner blocks and fans. The narrower border runs along the front of the chimney breast, defining a painted central panel which is embellished by a polychromed central plaster rosette. The draped mantel and greenery on the mantelpiece indicate that this picture was taken during the summer months.

(Photo courtesy of Oregon Historical Society, Portland, Oregon. Neg. no. 28207)

Flaunting High Ceilings

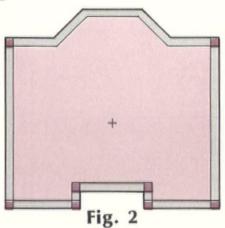
If the ceilings in your house are over 9 feet high, remember that the Victorians would consider BOTH their walls and ceilings in their decorative schemes. Even a 9-foot ceiling



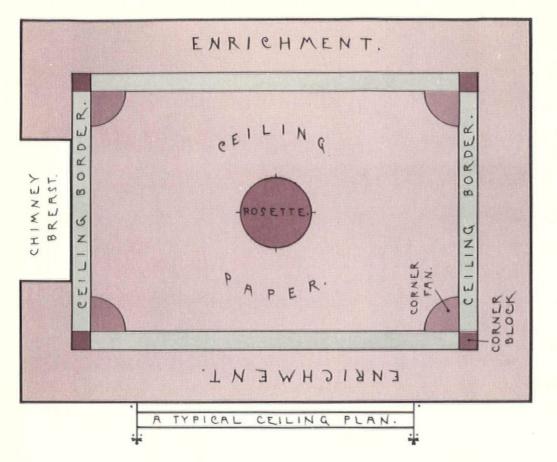
might have a simple stripe around its perimeter with tiny corner fans. Generally speaking, the higher the ceilings, the more elaborate their decorations: "If you've got it, flaunt it"—19th-century style.

One of the most common ceiling layouts was to have a border run along the front of the chimney breast and continue around the room at the same distance from all the walls. (See Fig. 1) The space between the border and the cornice could be filled with paint (either plain or embellished with pinstripes), wallpaper enrichment, or stencils. This method of laying out a ceiling resulted in a symmetrical center panel in an otherwise irregular room. These center panels were usually rectangular, but could also be square or polygonal, depending on the particular characteristics of the room. Center panels were also painted, papered, or stencilled, and in large formal rooms were sometimes subdivided into geometric sections.

A second method of ceiling decoration sought not to minimize a room's irregular fea-



tures, but rather to emphasize them by running borders that faithfully followed all the turns of the walls, resulting in an irregular central space in the room. (See Fig. 2)





The Photo

This exuberantly decorated San Francisco parlor, c. 1880, features a gilded wallpaper and frieze combination topped by an elaborate ceiling of paint, wallpaper, stencil, and decoupage. The cornice is brightly polychromed and has a wallpaper border glued to its cove.

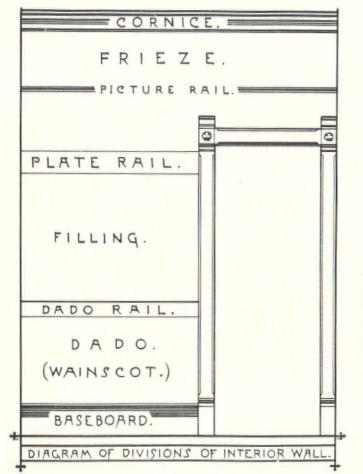
The enrichment area is divided into equal proportions, with the side nearest the cornice decorated with a floral wallpaper border that has elaborate corner blocks which appear to be pasted decoupage elements. The second half of the enrichment area is finished with flat paint.

A wallpaper border flanking the chimney breast defines the central ceiling panel, which features trapezoidal painted and pinstriped elements at its longest ends. The central ceiling panel also has a filigree border stencilled over the ceiling paper, with painted or stencilled corner fans.

The rosette, which at first glance appears to be unadorned, is lightly polychromed, probably with glazes rather than flat color. Certain parts appear to have gilded highlights.

Unusual in this photo is the light (possibly marbleized) woodwork, as wood graining or pinstriping were the preferred treatments of the period. The heavy portieres (over the doors), wall-to-wall bordered carpet, and the fringed hearth rug would normally be used during the winter months and removed in the summer.

(Photo courtesy of California Historical Society, San Francisco, Calif. Runnels & Stateler, photographers. Neg. no. 25317)



The most exciting book we've seen this year is from Australia and costs \$70.

Bruce Bradbury told us, "You have to buy this book!"

"Australia?" we said. "Seventy dollars for a new book?!"

"Buy the book," said Bruce.

Well, Victorian Splendour: Australian Interiors, 1837-1901 by Suzanne Forge is gorgeous. (Like American interiors, Australian interiors during the 19th century were based on English models, so the book is pertinent.) Feast on the unrestrained but skillful use of color. After you've drooled over the pictures in this book, you'll have a hard time tolerating a white wall in a Victorian house ever again.

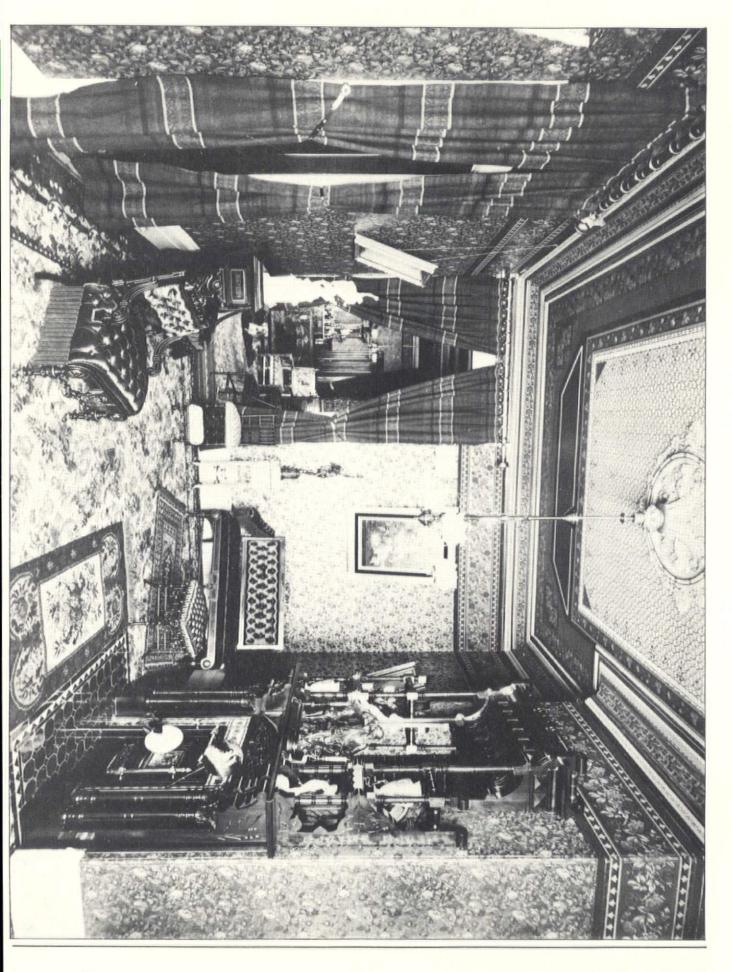
To all decorators, stencillers, art historians, and homeowners about to begin their Victorian interiors: "Buy this book."

To order: Oxford University Press

16-00 Pollitt Dr., Dept. OHJ Fairlawn, NJ 07410 (201) 796-8000 \$70 plus \$2 postage

Bruce Bradbury of Bradbury and Bradbury Wallpapers is a respected historian and manufacturer of late 19th-century wallpapers. Next month, this series will continue with an article on the Anglo-Japanese mania of the '70s and '80s.

You can obtain further information about Bruce's papers by sending \$1 to: Bradbury & Bradbury Wallpapers, PO Box 155, Dept. OHJ, Benicia, CA 94510. (707) 746-1900.



Blank Walls Are Melancholy...

By Ron Pilling

O HANG PICTURES in every room ... Nothing does so much toward furnishing a house."

Mr. Frank M. DePuy, in his 1900 volume

The New Century Home Book, offered this advice
for the new homemaker. By this time, Victorians had been covering every square inch of wall space with prints and chromos.

IT WAS NOT that using framed pictures as wall decoration was new in post-Civil War America; but until inexpensive prints were available to the working class, pictures were the province of the wealthy. Around 1840, printers began turning out landscapes, romantic scenes, and portraits by the millions, and Americans immediately discovered the art of picture hanging and arrangement.

COLONIAL INTERIOR DECORATORS hung pictures in much the same way as we do today: A wire was strung behind the frame and the picture was then suspended from a nail in such a way that neither nail nor wire showed. In 1870, "dropping a picture moulding" was one of the first steps taken when modernizing an early American home. The picture moulding was a thin piece of wood trim, with a slot cut into its top. The moulding was nailed to the wall near the ceiling. In most cases, it went all the way around the room. Framed pictures hung on long wires from gilt hooks made to hang in the moulding's slot.

ACCORDING TO the 1894 Montgomery Ward Catalog, mouldings "give a complete finish to a wellpapered room; besides, the convenience for hanging pictures is worth more than the cost." No

doubt, hanging pictures from a moulding gave the decorator great flexibility. One could shift pictures around, or try them at different heights and in different rooms, without driving a lot of nails into plaster.

PHOTOGRAPHS of 19th-century rooms lead one to believe that no proper home was without a picture moulding. Its addition to a restored Victorian house is equally appropriate today. Unfor tunately, Montgomery Ward no longer carries moulding or picture-moulding hooks.

BEFORE HEADING to the lumber yard, consider the decorating possibilities presented by picture moulding. Put-

ting up the moulding itself requires certain aesthetic decisions. In the absence of a cornice, the moulding was generally put right at the ceiling. It could be hung at the bottom of the cornice, becoming visually a part of the cornice. If the ceiling was high enough, it could be hung a foot or so beneath the cornice.

IN THE LAST CASE, this arrangement created a space between the two mouldings, one which was wide open for decorative treatment. A common response to this opportunity was to hang a wide wallpaper border above the picture moulding. (The 1885 parlor of Mrs. F. Sheares of Skaneateles, N.Y., had this feature.) The space could also be filled with Lincusta-Walton or plaster decoration.

Aesthetic Considerations

HE FIRST STEP is choosing a moulding. Some well-to-do homeowners boasted an ochre-lacquered, silver-leaf moulding (as seen in the 1869 home of Leland Stanford, a prominent Sacramento lawyer). Other early mouldings were gilt or combinations of gilt and painted wood. Many had carved or embossed decorations, the most popular being the egg-and-dart. were generally between one and two inches tall, with the aforementioned groove for the hook.

GILT FINISHES for picture moulding matched the Victorian gilt picture frames. The earliest mouldings featured gilding with various metals, including gold and silver. Later mouldings were finished in multi-colors, sometimes a buff base tone with raised parts highlighted in gold gilt or pastel colors. Homeowners were admonished to consider the color scheme of the room before choosing a finish for their Today, try one of the rub-on gilt ("Rub-and-Buff" is one brand that's woodwork. finishes. available in art supply stores.) Shortly

after 1900, plain oak mould-

ings with naturally varnished finishes were used. (By that time, however, picture mouldings were becoming a thing of the past.)

STOCK PICTURE MOULDING is no longer readily available, but there is a good selection of potential substitutes sold at home centers, wood specialty shops, and through the mail. The favorite eggthe mail. The favorite egand-dart in embossed wood still makes a fine moulding and is easy to find. Cutting the groove in the moulding's top is most easily done on a table saw. The groove should be about ½ in. deep and 3/16 in. wide. If it isn't deep enough, the hooks may not hold under the weight of a

heavy picture. Check your millwork sources and scan catalogs from the firms listed at the end of this article or in the OHJ Catalog.

TO HOLD the finished mouldings securely to the wall, use stout finishing nails driven into the studs beneath. For greater holding power, add a bead of building adhesive before nailing

Virtually every house during the Victorian era had picture mouldings from which homeowners could hang a variety of paintings, mirrors, photographs, etc. Mouldings and hooks both used to be hardware-store items . . . but now they're not readily available.

With this article, you'll learn how to adapt standard wood mouldings and ordinary brass stock to make your own picture moulding and decorative hooks. Not many do-it-yourself projects are so quintessentially Victorianand so low budget!

up the moulding. If the moulding is to go on a wall that is plaster laid directly over masonry, you may want to use lead or plastic anchors. Drill holes in the embossed picture moulding for the anchors' screws--choose a spot in the decoration where the screw would be unobtrusive. The moulding is going to be well above eye level, so it should be easy to hide the fasteners.

MOST EARLY HOOKS were either solid brass or gilt-over-brass. The antique hooks still doing service (after more than a century) at the Landis family home near Lancaster, Penn., are simple S-hooks with round, embossed brass decorations. They are much the same as the new hooks shown below.



Picture hooks can easily be fabricated from brass. The ones in this photo (and in the photo below) were made from 1/8-inchthick brass stock. The decorations are antique brass cabinet knobs, epoxied in place.

YOU CAN EASILY FABRICATE picture hooks to specific designs for your moulding. Brass stock can be purchased in various sizes at hobby shops where it's sold for model trains. The newly made hooks shown above are made from 1/8-in. brass stock, and are ½ in. wide.

USING PLIERS, bend the brass to the proper shape. Test the top bend to assure that it

sits securely in the moulding groove. For decorative touches, get embossed brass buttons about 1 in. in diameter and solder or epoxy them to the hooks. (Each hook generally has a pair of buttonlike decorations.) Other appropriate brass items can be found in the cabinet hardware department or at the



antique dealers who specialize in old hardware.

Four picture hooks as they were originally advertised in the 1895 Montgomery Ward Catalog.





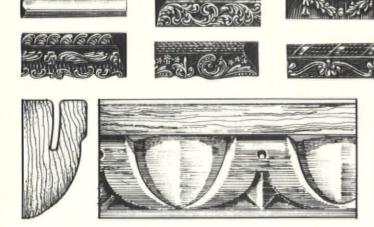
A gilt-and-powder-blue picture moulding surrounds the parlor of the Landis family home. That reverse-glass painting is hanging from a single hook — one that was installed over a hundred years ago!

The Hanging

TITH THE PICTURE MOULDING in place and the hooks ready to go, it's time to consider the wire to be used, the number of hooks and wires for each picture, and the arrangement of pictures and wires on your wall. Modern picture-hanging wire, made of braided steel or copper, is identical to the wire used a century ago.

VICTORIANS MADE absolutely no effort to hide the wire. On the contrary, the wires and their geometric shapes were an important part of the decorating scheme. Amateur decorators went to great lengths to mix one-hook and two-hook methods. (The former results in an inverted-V wire; the latter, a pair of parallel wires.) Some especially creative home decorators used double-V wires, hung several pictures together with different wire patterns, and otherwise mixed and combined the line patterns made by the wires on the wall. The only attempts made to conceal the wires were when ivy was trained to climb them to the ceiling.

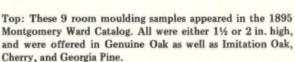
LARGE PICTURES, for reasons of security, may require heavy double wires. Other heavy objects, such as mirrors, will also be safer with a two-wire arrangement.







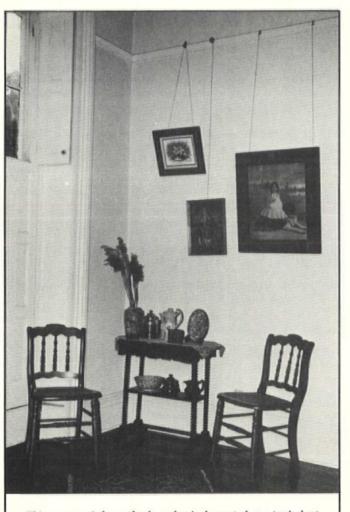




Left: Egg-and-Dart moulding is readily available today. The profile shows how the groove is cut in for the picture hooks.

MUCH AS THE MANNER of picture hanging changed over the years, so did the styles for arranging pictures. In the late 1840s, the earliest days of picture moulding, it became popular to hang pictures very high, tilting them toward

the floor to give the viewer a complete perspective. Usually they were hung with top edges a uniform distance from the ceiling. Balanced hanging with very regular placing was the accepted style.

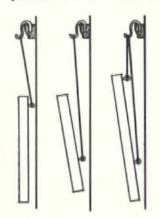


This corner of the author's parlor is decorated as a typical art unit, circa 1870. Pictures are hung from an egg-and-dart picture moulding, with those nearest the top tilted downward. A collection of objets d'art occupies the spool table beneath.

The Art Unit

ANGING STYLES CHANGED with the explosion of inexpensive artwork. Beginning about 1870, Victorians arranged both wall decorations and table settings into random 'art units.' An art unit might consist of half-a-dozen framed chromos, family portraits, silhouettes, or hanging plates over a set of standing easels with more framed artwork. Sometimes the easels were replaced by a table or an etagere, draped with a tassled lambrequin and filled with porcelain figurines, souvenirs, or tintypes in folding frames.

HANGING PICTURES in art units were randomly arranged with varying wire patterns. Pictures hung very high were often tilted downward so that they could be seen from below. Low-hung pictures were then hung flat against the wall.

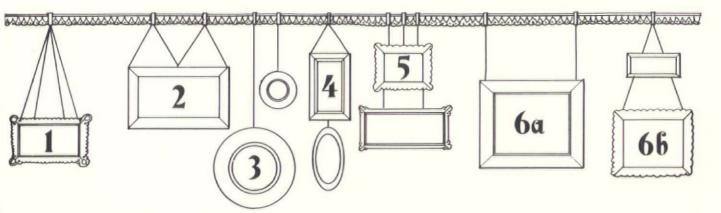


Left: If the wires are hooked to the frame at the very top, it will hang flat against the wall.

Center: As the wires are hooked lower on the frame, it tilts more toward the floor.

Right: For heavy objects, such as large framed mirrors, an additional wire hooked to the top of the frame keeps it from flipping over.

IT WAS IMPORTANT to homeowners to display their art collections, no matter how humble. The art unit was largely brought about by poor interior lighting. By grouping pictures and objets d'art in small areas, light could be more easily directed on them.



1) A large landscape hangs from a double wire on a single hook (as documented 1869, Sacramento, Cal.).

 A double wire, in an unusual V-shape, holds a heavy reproduction (1880, Bay City, Mich.).

3) A collection of plates is hung using a single wire for each plate (1888, Brooklyn, N.Y.).

4) The oval portrait hangs from the frame of the rectangular paint-

AFTER THE INTRODUCTION of electricity to homes, however, the art unit began to disappear. Light was more evenly spread through a room, and it was easier to locate a light source near a piece of art. As a result, hanging pictures were more widely spread. Also, the novelty of inexpensively purchasing hundreds of different pictures was gone, and so homeowners exhibited more self-control in the volume of pictures hung.

THOUGH PICTURE MOULDING was a stock item for millwork houses through the '20s, its popularity waned from then on. Ceilings were lower, and the Colonial Revival in architecture and decoration branded visible picture wires as hopelessly Victorian. Pictures were hung on invisible wires, a style that has persisted to the present. Isn't it about time for a change in our picture-hanging habits?

Sources For Materials

The Woodworker's Store 21801 Industrial Boulevard, Dept. OHJ Rogers, MN 55374 (612) 428-4101

An outstanding collection of carved-wood trim, embossed mouldings, and framing. Some of their picture-frame moulding are ideal for the wall-mounted trim described here. Catalog, \$1.

> Albert Constantine And Son 2050 Eastchester Road, Dept. OHJ Bronx, NY 10461 (212) 792-1600 Carved & plain wood mouldings. Catalog, \$1.

Bob Morgan Woodworking Supplies 1123 Bardstown Road, Dept. OHJ Louisville, KY 40204 (502) 456-2545

General line of woodworking supplies. Catalog, \$.50.

Model Shipways

Dept. OHJ Bogota, NJ 07603 (201) 342-7920

Model ship kits & materials, including brass stock. Catalog, \$2.

ing above it (1881, London, England).

5) The top picture hangs from three wires hooked to the moulding; the bottom hangs from two wires attached to the frame above. Both hang flat against the wall (1858, London, England).

6a) A heavy mirror hangs tilting from a double wire, about ten feet off the floor. 6b) Two pictures hang on the same V-shaped wire from a single hook (1885, Boston, Mass.).



Top: This photo, taken in 1900, shows the Boston parlor of Julia Ward Howe. She used her picture moulding to separate a painted wall from a wide border of iris-patterned paper. Note the asymmetrical effect created by the different wires used to hang the similar frames that flank the large mirror at center. Bottom: Pictures are hung randomly on the side wall of Thomas Little's San Francisco parlor in 1875. To the rear, however, they are neatly balanced. Note that some hang at an angle and others are flat against the wall.

(Both photos reprinted from THE TASTEFUL INTERLUDE by William Seale.)

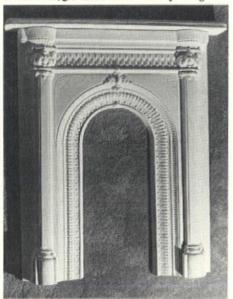


I just took a look back at our very first OHJ Buyer's Guide Catalog, a 32-page booklet punched out on a typewriter in 1976. Even with only 300 companies and some 200 products, it gave readers a fairly complete listing of restoration products available at the time.

The reproduction market has grown tremendously since then! Our 1984 Catalog — 208 pages, just off the press — lists 1,251 companies nationwide. . .and nearly 10,000 different items. I don't have room here to list all that's new — but I have picked out some of the more unique new entries.

While vacationing in San Francisco, I discovered Windmill Interiors, a source for traditional fireplace surrounds made of an untraditional material — plaster. These are purely decorative, of course; use only with a non-working fireplace. (False fireplaces have always been in Victorian and 20th-century houses.) The company is offering four finely detailed reproductions of c. 1910 English castiron faces.

Sizes range from 26½ to 46½ inches wide, 35 to 48 inches high, and 3½ to 4½ inches deep. Three of the models are for small coal/gas fireboxes with openings of



Windmill Interior's plaster fireplace surrounds are copies of 1910 designs.

Victorian decorative-arts maven Bruce Bradbury put us onto a source for a limited supply of vintage "decals." Here is the story: Five years ago, Windowphane purchased (from an old importer) a supply of transparencies which had been manufactured in Europe around 1910. Such decals, imitative of stained glass, were used in numerous homes and churches until after 1900. The secret process for silk-screening the decals by hand in brilliant colors had been developed in the 1870s — and has been subsequently lost.

Today, these old transparencies retain their original colors and fine detail. After immersion in lukewarm water, a decal can be fused to any clean glass surface. Windowphane's limited supply of about twenty designs includes pre-Raphaelite maidens and Gothic patterns. Decals range from 9 inches square (\$6 each) to

18-inch by 8-inch (2 panels for \$50). Free brochure. The Windowphane Co., Inc., 38 W. 32nd St., Suite

1611, Dept. OHJ, New York, NY 10001. (212) 695-0070.





Antique transparencies with fine detailing and gorgeous colors.



HIGHLIGHTS FROM

10 to 12 inches (\$195); the fourth model is larger with an opening of 171/4 inches (\$295). The surrounds can be finished with latex or oil-based paint, or marbleized as their cast-iron predecessors often were.

The company also sells antique castiron surrounds and reproduction plaster ceiling medallions. Their brochure is \$1.50. Windmill Interiors, 2508 Laguna Vista Dr., Dept. OHJ, Novato, CA 94947. (415) 897-8500.



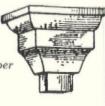
Gutters. Not a terribly exciting product category, unless you're looking for an old-fashioned guttering system that just isn't readily available anymore. We have only recently discovered a ready source for *stock* copper gutters. The Copper Sales Co. handles even ogee and half-round gutters, corrugated leaders, and copper hangers. The stock gutters are sold in 10-ft, lengths.

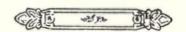
The company also handles galvanized and aluminum gutters. To compare: 16-oz. copper costs \$3 per foot, aluminum is a little over \$1 per foot. But these are materials costs only; the big costs of fabrication and installation remain the same whatever the material. So it pays to use the best material when possible.

You can order direct if the company doesn't have a dealer in your area. For a free flyer illustrating their gutters, write The Copper Sales Co., 2220 Florida Ave. South, Dept. OHJ, Minneapolis, MN 55426. (800) 328-0799.



Besides gutters, Copper Sales offers lots of accessories such as these.





Unique Services

In compiling the OHJ Catalog each year, we run across some special services which aren't standard headings in the Yellow Pages. For example, whom do you call if you have an antique ceiling fan — one that's missing its blades, or that has a damaged casing? We've come upon two companies that restore old fans: M-H Lamp & Fan restores both desk and ceiling fans, while the Brass Fan Ceiling Fan Co. limits their work to ceiling models.

Both companies restore finishes, replace or repair wooden blades, and do mechanical and electrical work. Restoration costs vary, but it seems a basic overhaul is around \$75-100, and new blades, installed, cost about \$50. By the way, both companies offer old and antique fans for sale. M-H Lamp & Fan Co., 7231½ N. Sheridan Rd., Dept. OHJ, Chicago, IL 60626. (312) 743-2225. (A description of services is free with SASE.) Brass Fan Ceiling Fan Co., 1101 Stapleton, Dept. OHJ, Flower Mound, TX 75028. (214) 539-1052. (No literature.)



This antique 1895 "Dayton Direct Current Ceiling Fan" was restored by the owner of M-H Lamp & Fan Co.

Douglas Elbinger used to be a photo historian. Sensing a growing appreciation of the past among non-historians, he began to offer his services to the public — by restoring heirloom photos. His photo lab has clearly filled a need: The company has grown steadily since 1972, and now restores and copies old photos for private individuals and museums all over the country.

The copies often enhance the print quality of the original. Minimum cost for

for copying a photograph is \$29, which includes a 4 x 5 print and a large-format negative. Restored copies of damaged and stained photos can also be made. Send \$2 for more information to Elbinger Laboratories, Inc., 220 Albert Street, Dept. OHJ, East Lansing, MI 48823. (517) 332-1430.





BEFORE AFTER Affordable photo restoration.

A firm that restores old theater seats may be our most arcane listing this year. Country Roads does their work in a large plant in Michigan, or on site in their mobile plant. They'll replace or repair wood or metal parts, refinish seat covers, and so on. Good news: Restoration costs about 50% less than new seats of comparable quality. Free brochure from Country Roads, Inc., 1122 South Bridge St., Dept. OHJ, Belding, MI 48809. (616) 794-3550.

DUR NEW CATALOG

The following companies aren't new to our Catalog. But the light fixtures shown here are part of a new trend in reproduction fittings. These three companies, at least, are offering handsome reproductions of post-Victorian fixtures.

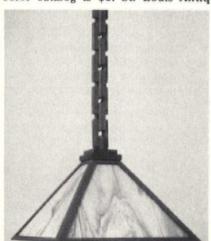
St. Louis' Mission Style ceiling fixture would be a handsome addition to a Craftsman-inspired home. The frame is solid oak; you can specify caramel, blue, or green glass. The fixture is \$480. A color catalog is \$3. St. Louis Antique

Lighting Co., 25 N. Sarah, Dept. OHJ, St. Louis, MO 63108. (314) 535-2770.

Already well known for their reproduction Victorian fixtures, Victorian Lightcrafters also makes the turn-of-thecentury fixture shown here. In solid brass, 4-, 5-, or 6-arm, it's \$250-350. (The shades are extra — about \$10 per piece.) Their new catalog, \$3, has one other turn-of-the-century chandelier and a variety of appropriate shades. Victorian Lightcrafters, Ltd., PO Box 332, Dept. OHJ, Slate Hill, NY 10973.

(914) 355-1300.

This copy of a c. 1920 ceiling fixture is an exciting new trend in reproductions. Ocean View Lighting's \$300 fixture is hung from solid brass rods; its 14-in. opaque shade is American, handblown, etched glass. Their complete catalog featuring many other turn-of-the century fixtures is \$3; a flyer on the fixture pictured here is \$.50. Ocean View Lighting and Home Accessories, 1810 Fourth St., Dept. OHJ, Berkeley, CA 94710. (415) 841-2937.



(above) St. Louis' "Mission Style," (right) a chandelier from Victorian Lightcrafters, and (far right) a new fixture from Ocean View Lighting.









These photos originally appeared in The Oregonian newspaper. Correspondent Sue McCracken took the pictures and wrote the accompanying article: "History Exposed In Albany As Overlay Removed." Subscribers Barbara and Ray Mason sent us the story.



When We Began the Remuddling Of The Month Award two years ago, our intent was to provide a simple, dramatic (and admittedly unsubtle) public education tool. And it has been incredibly successful. Not only is Remuddling our best-read feature, but other publications are also beginning to use the term. "Remuddling" is on its way into the dictionary. However, some OHJ subscribers object to the Remuddling Award, calling it "negative" and "holierthan-thou." For anyone who may have winced at this page, we conclude our 10th Anniversary Issue on a positive note: Rather than decry bad work, we celebrate good work.

THIS MONTH, the remuddled photo is "before," and the beautiful, intact old building is

"after." This charming structure, built in 1892, started life as a livery stable. In the 20th century, it housed a variety of stores in downtown Albany, Oregon. Currently it's a movie house and florist shop. The aluminum overlay was added in the 1960s; the original stucco facade didn't re-emerge until this year.

CREDIT for the rescue goes to the Albany District Association. With two residential historic districts, Albany has more historic buildings listed in the National Register than any other city in Oregon. This building is close to approval for the National Register, too. More power to Albany and the ADA. As Ms. McCracken observed, "progress sometimes means taking a step backwards."

The Old-House Journal

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November 1983 / Vol. XI No. 9/\$2.

The Old-House Journal

Lattice Work

by Larry Jones

structures.

AINTED wood lattice is most familiar as the screen under an old porch. It's also found under exterior stairways, and as privacy screening and shading for sleeping porches. Most romantically, perhaps, lattice work is associated with gazebos and other ornamental

BENEATH a porch, it has a very practical value: Lattice allows air to circulate while it provides a visual screen. Extending

nearly to the ground, lattice is admittedly fragile and decay-prone. Periodic painting is a necessity -- and still it won't last forever. But whether it's plain or fancy, there's no denying its decorative appeal. Lattice can even mask unsightly intrusions such as garbage cans and air conditioning equipment. And it's not hard to make.

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GLAZING PLASTER WALLS



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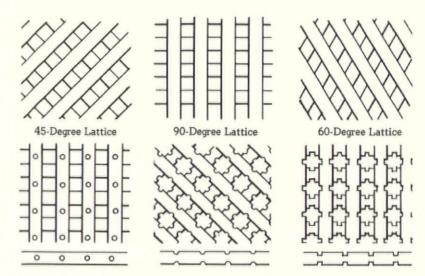
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IF YOURS IS MISSING or deteriorated, you'll be happy to learn that making wood lattice is easy and inexpensive, if you do it yourself. On these pages, not only will you learn how to make good-looking lattice that will last a while, but you'll also see some examples of unusual decorative lattice designs.

Detective Work Closely examine areas you think might have been enclosed with lattice. Look for remnants of old lattice work and evidence of mounting locations.

AN OLD PHOTO of your house or others like it in your area will help you determine what lattice work you might have had, its design, and probable location.

Pick A Design -- a design that's appropriate or original to the period and style of your house. Avoid designs that are too ornate for the house.

CHANGES IN GRADE along the run of the lattice will affect the design and must be planned for.

PLAN FOR an inconspicuous access door in the lattice to allow for inspection of the enclosed space.

MOST LATTICE runs diagonally at a 45-degree angle, less commonly at 60- and 90-degrees.

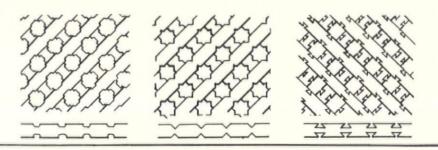
SKETCHES--better yet, measured drawings--are the best way to see what the lattice will look like before you build. Measure off the existing openings and their surroundings, and make drawings at a convenient scale, say, one inch equals one foot.

Choosing The Timber Lattice, like lath, was made from pine (yellow or white), spruce, fir, redwood, or other soft knot-fre wood. The standard size is 5/16 in.x1½-in.x4-ft., packed in bun dles. Longer strips can be made by ripping 2x4s of the desired lengths. Plaster lath is available at most lumber yards...and is cheap.

FRAMING LUMBER TO RESIST DECAY should be Wolmanized, pressure treated, or redwood. Trim piece should be clear pine, preservat treated for long life. Non-toxi preservative or waterproofer should be used on all non-factory treated lumber.

The Site Soil builds up around porches over the years, altering the original grade. You may wish to lower and recontour the area before designing lattice.

POOR DRAINAGE can be improved with good guttering and proper sloping of the soil. Avoid letting water splash onto lattice.



Framing The Enclosure Follow the original framing design, if part of it remains.

NO WOOD should be within 3 in. of the soil. Gravel laid over plastic film forms a good underlayment and moisture barrier under porches and lattice.

TO ENSURE A STURDY bottom rail, support it every 3 or 4 ft., or diagonally brace it from behind.

LATTICE doesn't have to be nailed to the face of the framing. It can be screwed into place. This allows for easy removal of damaged lattice from the frame, repairs, and any future repainting.

FRAMING JOINTS can be sealed tightly with exterior construction adhesive or polysulfide caulk.

A STURDY, HINGED access door should swing out on heavy, outdoor hardware. Mortise and tenon for decoration. Rust-resistant joints are best for the door.

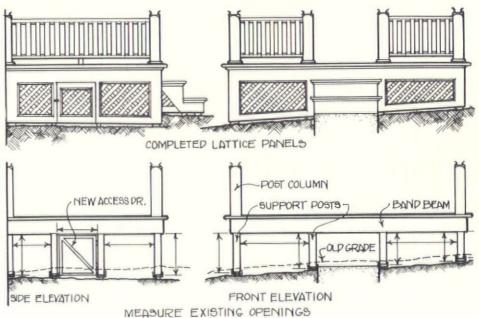
The Lattice Work CAUTION: The erably strengthen the panel. ready-made lattice panels available at local lumber yards are much too thin and fragile, and are the wrong size for use on Victorian houses.

LATTICE STRIPS up to 2-in. wide are occasionally seen on larger buildings, but the 112-in. width is the most common size.

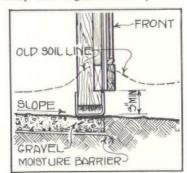
DESIGNS CAN BE CUT INTO a number of lattice strips at once by clamping them together, marking and making repeated cuts.

A TABLE SAW, radial arm saw, hand saw, back saw, or even a router can be used to cut the desired design into the strips.

SAND LATTICE STRIPS to the desired smoothness and cut to the appropriate length. Sand edges of the strips while they are still clamped together.



added to lattice intersections screws, attached from the back side to every third intersection of the lattice, will consid paint when it's in place.)

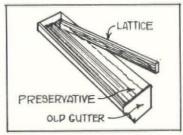


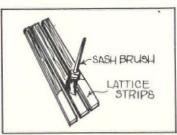
Preservative & Painting Diptreat all lattice pieces in nontoxic preservative or waterproofer for 3 to 10 min. and allow to dry 24 hours. (Old guttering with capped ends makes a good dip trough.)

PRIME ALL SIDES of the lattice. Use a brush; don't spray paint.

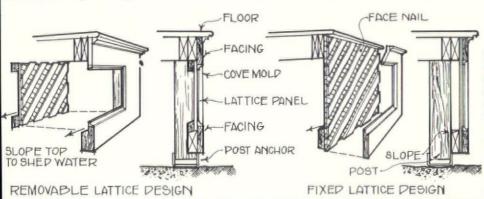
WOODEN, ROUND-HEAD PLUGS can be FOR LONGEST PAINT LIFE and best protection, apply two top coats of paint to the lattice strips before nailing them onto the frame. (Lattice is murder to

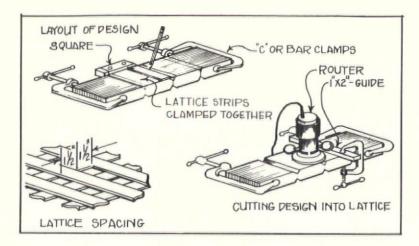
> TRIM PIECES are best cut to size, treated, primed, and given a top coat of paint prior to assembly. Once in place, fill all the joints, sand, and apply the final top coat of paint.





LATTICE IS OFTEN set off from the facing and trim by being painted a different color or shade of the same color. To accentuate the void and downplay the lattice screen, dark reds, greens, and black were commonly used. More ornate designs of lattice were usually painted light colors or white in order to make the decoration more readily visible.



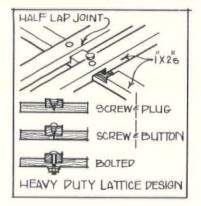


Installing Lattice Lattice is often hand nailed with galvanized nails. Care must taken to avoid splitting the thin lattice when nailing.

THE TWO METHODS OF attachment are shown on page 195. Begin by attaching one strip at the right angle, then use a second one as a spacer to help accurately position the rest of the strips.

AN ADJUSTABLE BEVEL or triangle is handy for setting the first strip at the proper angle. Recheck the angle of the strips often as they are being nailed up. The angle is best set from a level surface, perhaps the porch floor or floor joist, or by using a long level.

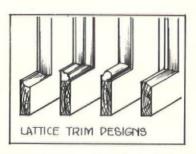
LATTICE CONSISTS OF two layers, which must be properly spaced and aligned, especially with more decoratively cut lattice.



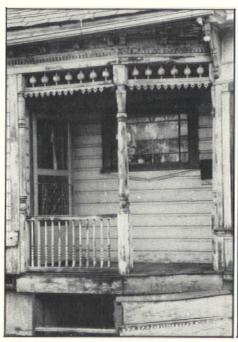
Maintenance Once all pieces are in place, make sure all joints are tightly sealed. Touch up any scratched or damaged paint.

DON'T FORGET MAINTENANCE: Wood can be expected to expand and contract, leaving joints open and in need of filling. Correct any moisture and paint-peeling problems as they occur. Twice a year set time aside for making thorough inspections of porches and lattice work, making sure to clean away dirt and debris.

LAST, avoid letting soil or shrubbery come in contact with the wood. If you maintain it, lattice work will last a very long time.



Front page photo is of the Best/Cannon House in Salt Lake City, Utah, owned by Mrs. Phyllis Stringfellow. It was a recent rehabilitation project assisted by The Neighborhood Housing Services of Salt Lake City. Photo is courtesy of The Utah State Historical Society.



Severe structural problems, not to mention the missing lattice work, had befallen the Best/Cannon House prior to its rehabilitation. Note the newly installed concrete foundation that replaced a collapsing brick one.



Here is the same porch after rehabilitation; the new lattice is installed back in its original position below porch and steps. Note how the concrete foundation has been clad with brick to resemble its original appearance.



The verandah on this house in Logan, Utah, shows how lattice could be curved to suit the building's requirements. Wood screws were used at the lattice intersections to join the front layer with the back one.





A Love Affair With Restoration

Old-House Living In Sherborn, Massachusetts

By Patricia & Richard Bates

THROUGHOUT our married life, we have continually "upgraded" to an older house. We began with a new home, then a seven-year-old townhouse and a 1940 Cape Cod, all in the Midwest; a 1935 "Colonial" in New York; and finally an 1848 Greek Revival and an 1810 expanded farm cottage, both in Massachusetts. Each succeeding home was also an improvement to our lifestyle. In 1982, a friend bought a 56-acre estate and offered to sell us a 41-acre portion. We jumped at the chance, bought the land, and commenced planning our "new" home.

THE ONLY THINGS we never cared for in old-house living were the poor locations; poor wiring, insulation, heating, etc.; and poor basement and foundations. We toyed with the idea of moving a house--this had been done recently in our town. But this approach wouldn't solve the insulation and wiring problems, and was

too restrictive in our choice of houses. But disassembled houses can come from almost anywhere, and wiring and insulation could easily be attended to during reassembly. This way, we could achieve the best of both worlds: an antique house with the benefits of a new one.

WE SETTLED ON an 1830, nineroom, center-hall Cape Cod,
originally built in Connecticut as the home of the owner of one of the town mills.
This elegant house had been
dismantled and was slated
for a nearby museum village.
Their project, a mill village, was cancelled, thus
enabling us to buy the house.
Much documentation accompanied it, including a study
linking the house to the
noted Providence architectbuilder, John Holden Greene.

EANWHILE, in January of 1983, we came upon another house: a two-storey, 12-room, center-chimney Georgian farmhouse. We later learned that it was built around 1790 by the Mendon, Mass., selectman, Moses Daniels. It remained in his family for a hundred years, and had been neglected for only the last ten years. Asphalt siding now covered the entire house, and the roof and all systems needed much attention. It had been abandoned for two years and was besieged by vagrants, vandals, and the weather. It was now or never for this oncemagnificent house: It would soon be vandalized to death if no one stepped in to save it.

WE QUICKLY EVALUATED whether we could save the house by working it into our project. Its greater size and farmhouse design actually fitted our land better than our first house did. The museum house's pedigree and documentation

would facilitate its resale, so we decided to change houses in mid-stream.

DISMANTLING our new house was an interesting phase of the project, as it involved opening walls that hadn't been disturbed since the house was built. Few artifacts were found, but many interesting structural surprises were uncovered. Remuddlings had eliminated the side door and hall to make a bedroom. Also, the front door pediment had been discarded to make way for a screened porch.

REPLACING the discarded items was difficult but rewarding. After seeing a 1905 photo of the house, we decided to reproduce the front door pediment. A replacement for the side door



In the upper left corner of this page, you see the house the same way Patricia and Richard saw it in January of 1983. The upper right shows the same house some nine months later — not yet completed, but definitely well on the way. The photo above shows the house in May of '83, just after it was reassembled on the Bates' property.

frame was retrieved from a long-abandoned house in northern Vermont. Its acquisition is a story all by itself.

YOU'D THINK that a frame with triangular pediment and five-pane rectangular transom would be easily located, but calls and visits to all the normal (and even abnormal) sources turned up nothing. In March, while returning early from a day at the ski slopes, we chose a seldom-traveled back road. Suddenly, some 500 yards from the road, we spied a very old abandoned house. Curiosity got the best of us, and when we got to the front side of this caving-in pile of wood, we discovered our exact door frame--perhaps the only salvageable item in the whole structure. With some difficulty we found the owner, and after many conversations purchased the door. We traveled 400 miles and brought it back in our trailer.



That's a Vermont door frame on the side of this Massachusetts house. Pictured at right is Patricia Bates, posing with the frame prior to its installation.

POR THE MOST PART, our house was complete. Many non-essentials were destroyed or removed, but all the exquisite interior woodwork was intact. In fact, we estimate that at least 90% of the original wood was used in our reconstruction. The house greatly exceeded our original estimates in both its complexity of construction and the sheer volume of material that it had.

THE WALLS separating the front half of the house from the rear, as well as all exterior walls, used 3x3 studs (3x5 at doors and windows) on 13-in. centers. Bracing of posts (with 3x3 braces) was enclosed in all of these studded walls. Second-floor joists were finished and pegged into their girts at both ends, presumably to insure that exterior walls would never bow outward. The house was so overbuilt that two corner posts completely deteriorated over the years, but created no discernible sags!

A CREW of about six men took some six weeks to number and remove, via semi-trailer, every piece of wood in the structure. The house slowly melted away until all that remained was a cellar hole, a center chimney mass going up 1½ storeys, and a pile of debris.



Next, WE BEGAN our most daring operation:
moving the five fireplaces without disassembly. The two second-floor fireplaces were carefully, individually wrapped, as was the entire first-floor assembly of three fireplaces (one with "beehive" bake oven). Two I-beams were placed beneath the bed of 8x8s on which the chimney structure had originally been built A 45-ton crane (we'd requested an 80-ton) moved next to the chimney brace and individually removed the upper fireboxes and placed them into trucks. The I-beams were then lifted by their ends, and slowly, with some cracking noises, the first-floor chimney mass rose from its 190-

year resting place.
It was placed on a
flat-bed truck, and
the fireplaces were
all safely transported
to the new site.

HOWEVER, when the crane attempted to move into position at the new location, it had to come so close to the foundation that there would be a dan-



ger to the wall. And the flat-bed now blocked the crane and couldn't be moved back up the hill and out of the way until its load was removed. This meant an extra handling of the chimney mass. A larger crane arrived the next day, located itself safely, and moved its load into position (within an inch) without loss of another brick. The chimney is now built up completely through the roof--flue liners and top dampers were used for safety and convenience. It now looks as if the chimney and fireplaces have been there for 190 years.







Upper Left: This photo, taken in 1905, shows the house in its original location in Mendon, Mass. Note the front door pediment; the contemporary reproduction was based on this picture. Upper Right: This photo was taken even earlier, circa 1890. You can see the original side door frame, complete with five-pane, rectangular transom and triangular pediment. The salvaged door seen on the opposite page makes a perfect replacement, doesn't it? Left: This is the house — now disassembled — which the Bates initially bought. But when they discovered the house pictured above, they purchased it and put this 1830 Cape Cod back on the market. Built for an important Connecticut businessman, the house was intended for a prominent street location, whereas the Massachusetts farmhouse was just right for the Bates' 4½-acre property.

IN AN 1850 REMODELING, the fireplaces original to both ell rooms were removed. We had them reconstructed, using the floor framing and the original second-floor mantel as guides. Another fireplace was installed in the ell basement, at the base of the chimney structure. A new roof of red cedar shingles was also installed, and new sash were fabricated as required. A DuPont air-infiltration barrier, "Tyvek," was installed between sheathing and clapboards, and all clapboards have been back-primed for longer paint life. Insulation depths are controlled by joist and stud thickness, and will be six inches in the second-floor ceiling, and 3½ inches in outside walls.

WE LEARNED QUITE A BIT from this project. Surprisingly, 190-year-old oak that has always been kept dry isn't immune to warping. Our carpenter didn't realize this and allowed many structural parts to remain wet for an unnecessarily long time. Adequately protecting the wood would have been cheaper and simpler than coping with the line-up problems that we had during reassembly.

THE USE OF CAPSTONES on the top of a poured-concrete foundation apparently so confused our foundation man that his first pour was 1½ feet low; we had to put a second pour on top to get the desired level. We were able to save enough clapboards to completely resurface the front of the house. This will make the house look older, but it's certainly not cost-effective against the use of all new clapboards. Lastly, because of the high costs involved once woodwork is back in place, we're convinced that paint should be stripped between disassembly and reassembly.

WE INTEND to do more of this work. We love the houses constructed by our forefathers. Some are now disguised and forgotten. Yet many of these houses have retained enough original characteristics to be worthy of restoration, and can allow families to enjoy the charm and grace of the old with modern convenience and comfort. We will search out and match them with the enthusiastic owners they so desperately need. Our commitment is to preserve the heritage of New England's built environment.



Seen from the back, the Bates' house has gracefully adapted to its new location. Here, the ground slopes from front to back, so the basement was expanded to conform to the terrain.

AIT! Don't tear out old plaster just because of a few holes and cracks. There are all sorts of ways to save old ceilings and walls. Without hiring an oldworld plasterer, you can avoid redoing your rooms in gypsum wallboard. All it takes is knowing what tricks other preservationists use. This introductory article outlines the secrets of economical plaster repair. Methods here pertain to flat plaster only, not to cast or moulded ornamental plasterwork.

What Can You Save And Why Bother?

Ask Most contractors and remodellers, and you will be counselled to rip out less-than-perfect plaster to install gypsum wallboard. (Gypsum wallboard is a prefabricated, paperfaced plasterboard. It's also called drywall, wallboard, gyp-rock, gyp-board; in the East and elsewhere, its most common name is Sheetrock -- U.S. Gypsum's trade name.)

A MUCH BETTER IDEA is to save as much old plaster as possible, for very practical reasons. Patching is much cheaper than wholesale demolition and replacement with drywall. Also, real plaster walls are stronger and more soundproof than wallboard. And old plaster has a handmade, slightly wavy, slightly textured surface which contributes to the character of an old house. Drywall is perfectly flat and angular.

WITH THE PROCEDURES introduced here, you can save all the sound plaster. But no miracle product or process can rescue plaster that was poorly formulated, crumbling, or damaged by a water leak. Fortunately, bad plaster seldom covers an entire room, or even an entire wall: Patching is the answer. It's possible to get rid of bad areas and still keep most of the old surface intact.

Common Problems Have Common Solutions

PROOF THAT most plaster problems have simple solutions: Outlined below are proven techniques for common problems that homeowners often tackle themselves. In upcoming articles, we'll offer step-by-step instructions for some of these jobs.

HAIRLINE CRACKS are often cyclical: They'll come back to haunt you with the changing of the seasons. Rather than digging them out and filling with a rigid plaster, it's better to tape them, feathering with joint compound. A fiberglass mesh tape is available; it "moves" more than the paper tape can.

LARGER CRACKS are often stable in old buildings. You can tape them if they're straight. Long, spidery cracks should probably be dug out and filled with patching plaster. (If the crack is new or growing, find out what's causing it before you patch. Get help from an architect or structural engineer.)

Old~House Basics...

What's Possible In

HOLES LESS THAN 4 INCHES in diameter can be filled with patching plaster, or StructoLite with finish coats of joint compound.

MISSING PLASTER (and holes over 4 inches): Square up the damaged section so you can cut a close-fitting patch from Sheetrock. Tape as you would a Sheetrock seam.

CRUMBLING OR WET PLASTER will never "re-cure." Remove damaged plaster only, back to sound material at a stud or joist. Secure surrounding sound plaster with washers if necessary; make a Sheetrock patch.

IF PREVIOUS PATCHES were done poorly (or if you're stuck with a bad taping job), you can sometimes just add joint compound and feather the edges more carefully. (This works to fix depressions or a messy tape edge.) Otherwise, you'll have to pull the bad work apart and repatch or retape the area.

FOR A ROUGH SURFACE: If the plaster is sound and the finish coat is bonded to the brown coat of plaster beneath it, you might get away with skim-coating the rough surface with a thin layer of joint compound. Alternately, consider canvassing the plaster before papering or painting.



ALLIGATORED PAINT LAYERS comprise, unfortunately, an unsound substrate. It's tempting to try to fill the "alligator skin" with joint compound. But experience shows that this technique is good for about six months. You have only two choices: Strip the paint down to bare plaster, or -- if the paint layers are well stuck -- canvas the walls or ceiling.

IS THE FINISH COAT FALLING OFF the brown coat? (The finish coat is the fine, white, thin top coat of plaster.) Small missing sections can sometimes be patched in with joint compound. Finish plastering over an old brown coat occasionally fails because the new plaster doesn't bond to the dry old substrate, even if you wet it down. If such a patch fails on you, you'll have to take the plaster down to lath. Then patch with plaster or Sheetrock.

200

Plaster Restoration

BOWED PLASTER is the toughest problem. But even bowed plaster can be salvaged as long as the plaster itself has integrity. Plaster washers are the answer. If plaster and lath have together separated from the structure, long wood screws will go through lath into study or joists.

Three Plaster Restoration Secrets

THE SOMEWHAT ad-hoc techniques of plaster restoration are not the usual domain of drywallers, nor are they a regular part of the plastering trade. But these techniques could hardly be labelled "fudging it," because the three basic methods below are established, appropriate, and unobtrusive. They're also inexpensive and they work.

Plaster Washers

ONCE COMMON and now nearly extinct, these unassuming little discs have saved countless ceilings for OHJ subscribers since we first wrote about them in October, 1980. We learned about them from John O. Curtis, curator at Old Sturbridge Village, where an effort is made to save as much original plaster as possible. Used with a wood screw, the plaster washer assembly pulls bowed plaster back up tight to the lath or structural framing.

PLASTER WASHERS are handy in these circumstances: (1) Essentially sound plaster has lost its keys and is floating away from the lath. (2) A sound plaster-and-lath section is no longer attached to study or joists. (Bowed plaster will give when you press on it.) (3) The remaining plaster

around a hole needs extra support and anchorage before you patch the hole. (4) Washers can be used across a crack to draw the broken plaster back up tight to the stud or joist.

glass

PLASTER WASHERS are easy to install. The hardest part is finding them. (If you have trouble locally, order from Charles Street Supply Co., 54 Charles St., Dept OHJ, Boston, MA 02114. 617-367-9046. Min. order 3 doz.; \$1.25/doz. ppd.)

Drywall & Tape

AT STURBRIDGE, missing areas are patch plastered. But for non-plasterers, an easier alternative is to make a Sheetrock patch. Bad

plaster is removed. Then the hole is squared up so that a neat patch can be cut from Sheetrock to fit the hole. If you take your time cutting the patch, shimming it level, and taping the edges, the patch is invisible.

USE A SHEETROCK PATCH in a plaster ceiling or wall: (1) When the diameter of the hole

is more than 4 inches. (2) When you can cut the plaster back to studs or joists, to give yourself something to which you can nail or screw the patch. Smaller holes are best patched with a commercial patching plaster.

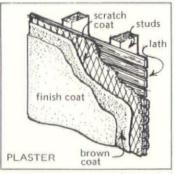
PAPER JOINT TAPE is readily available. You can also buy joint tape made of fiberglass mesh. The fiberglass tape costs more, but this difference doesn't matter much because you'll be using so little of it. The advantage of fiberlass tape is that it's more flexible; if a crack recurs, use fiberglass tape. Its disadvantage is that it's about twice as thick as paper, so it requires greater finesse to make unnoticeable feathered edges.

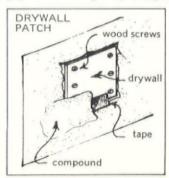
JOINT TAPE -- used to tape joints between sections of Sheetrock -- can also be used to mend cracks. Taping a crack allows some movement without the crack reopening. Treat the crack the way you would a seam in drywalling.

Canvas

COVERING PLASTER with canvas is not a "coverup." Actually, it's a centuries-old practice designed to protect fancy finishes from inevitable hairline cracking. Besides protecting your wall finish from future cracking, canvas will also hide cracks from the past.

WALL CANVAS is applied to sound, fairly smooth, patched plaster. Use it: (1) Over slightly rough,





pebbly, or poorly patched surfaces. (2) Over walls with many paint layers or alligatoring. Canvas won't cover dents, holes, or grossly uneven patches, however, so you still have to do some stabilizing, patching, and feathering before you apply the canvas.

CANVAS COMES IN extra-wide rolls for fewer seams (and for expert hangers), or 27-inch rolls for smaller rooms (and novice hangers). It is available through most wallpaper stores and it's hung like heavy wallpaper.

NEXT MONTH
Step by step to the perfect drywall patch



Stripping A Tub

ECENTLY, I ACQUIRED a porcelain tub. The inside porcelain is in excellent condition. Outside, however, the

tub has been painted a pale yellow, all the way down to its claw feet and balls. What is the easiest way to remove this old paint from the



tub? After the paint is removed, would I need to protect the iron from rusting?

-- Mary Jo Mette Montrose, Ill.

TRIPPING THE PAINT from the outside of your tub will be easy. A heat gun, chemical strippers, even a rotary stripper will all work efficiently. You'll have exposed the cast iron once you've finished, so you should immediately coat the exposed metal with a primer. The longer you delay priming, the longer oxygen and moisture can eat away at the metal. The next step is to repaint. Any good hardware store will sell you the right kind of paint for this job.

Paint On Paint

SIGNED A CONTRACT for two coats of oil paint to be applied to the interior plaster and woodwork of an 1840 house. Someone goofed, and after the prime coat of oil paint was applied to the plaster walls, a second and probably a third coat of latex paint was put on. I'm told by both an architect at the Historic House division of the National Trust and a spokesperson at the Park Service that these two different paint systems are incompatible. They say the paint coats will be unstable and that streaking or pulling away will occur in a matter of time. Is there a remedy for this situation? What can we do to avoid disaster?

-- Lee L. Prina Washington, D.C.

PLEASE DON'T WORRY about your paint job. You have been getting some very theoretical (as opposed to practical) advice, and it applies more to exterior painting than to interior.

THEORETICALLY SPEAKING, it's best to use the same kind of paint that's already on the substrate, especially outdoors where temperature differences are great and weathering occurs. But even outside, latex can be successfully applied over oil paint if the surface preparation prior to painting is well done, and if an oil or alkyd primer is used to create a bond between the old and new paints.

INDOORS, virtually all painters use latex on large surfaces such as plaster walls. It dries faster, releasing fewer harmful vapors into the house. (Pretty soon, it may be the only thing commonly available for house painting.) If the surface preparation before painting was good on your job--and especially because the prime coat was indeed oil--you should experience no

instability or streaking. In the future, problems with too many coats of paint (any kind of paint) will likely surface before problems with incompatible layers.

OUR RECOMMENDATION is to use oil or oil/alkyd paints on woodwork, because they impart a better gloss and are more durable than latex. But even if the painters used latex on your woodwork too, it's still not a disaster. The next time you repaint, go back to oil by first sanding all the woodwork well and then applying an alkyd primer coat.

Ventilating A Crawl Space

Y HOUSE has a cement-block foundation with some holes for ventilation, as well as some broken blocks and holes where pipes had been run through into the crawl space. Is it absolutely necessary to ventilate the crawl space with one or two open spaces?

--L. Stegbauer Decatur, Ind.

ENTILATION is unnecessary only when the crawl space is heated and the foundation walls are insulated. With an unheated crawl space, some ventilation is always required, but the amount can be greatly reduced by installing a polyethylene vapor barrier over the dirt floor. Without a vapor barrier, there should be at least four openings with a total area of 1/150th of the total floor area. With a vapor barrier, this can be reduced to a ratio of 1 to 1500, and the number of openings can be cut to two. You might also want to consider one of the number of available basement ventilators that are the size of a standard concrete block and have louvers and screening to keep out water and animals.

Calcimine Concerns

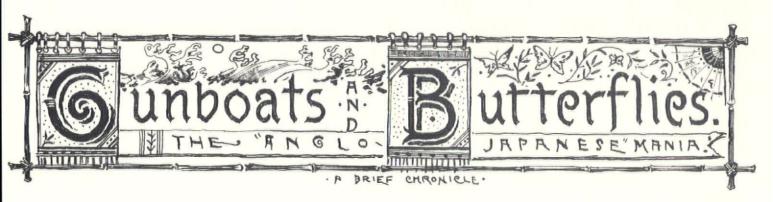
T'S RUMORED that the ceilings of my 1930 house are calcimine. How can I know for sure, and what are the considerations for painting over calcimine?

--Suzanne Basalik Plymouth, Mass.

PALCIMINE PAINT is water soluble, so if the paint on your ceiling starts to come off just by scrubbing it with water, it's calcimine. If it is, you'll have to remove it should you want to repaint, because neither paint nor primer will really adhere to it. If it's old, and going at it with water is too slow, try adding some ammonia to speed things up. The October 1980 OHJ has more information on dealing with calcimine paint.

General interest questions from subscribers will be answered in print. The Editors can't promise to reply to all questions personally—but we try. Send your questions with sketches or photos to Questions Editor, The Old-House Journal, 69A Seventh Avenue, Brooklyn, NY 11217.

What Great International Style Was The Result Of American Gunboat Diplomacy?



by Bruce Bradbury

N 1853 U.S. ADMIRAL PERRY succeeded where Columbus had failed: Sailing westward, he reached the mysterious and impenetrable "Japans," and at the metaphorical barrel of a gun invited a recalcitrant Shogun to open the islands to world trade. America's initial trade advantage evaporated in the 1860s as the nation plunged into Civil War, and the first stirrings of a coming design revolution happened not in New York or Philadelphia, but in the fashionable drawing rooms of London.

Cradle Of Liberty's

JAPANESE PORCELAINS were displayed in London in 1862; a small but ardent group of cognoscenti began collecting Japanese ceramics. A story, perhaps apocryphal, tells how these porcelains arrived carefully wrapped in discarded woodblock prints by the great Japanese print masters Hokusai, Hiroshige, and Utamaro. The delicately tinted prints captivated the Europeans and created a secondary market -- not only for the prints themselves, but also for the fabrics and objects of daily use pictured in them. The famous London shop of Liberty's opened in 1875 to provide a wide selection of Japanese goods to an ever-widening circle of admirers. cles of English manufacture "in the Anglo-Japanese style" became fashionable. The style was so named by one of its most brilliant practitioners, E.W. Godwin, to accurately describe the application of Japanese design to such Victorian necessities as bedsteads, armoires, dining-room sets, etc., which had no precedent in Japan. From the outset, the style was as much Anglo as it was Japanese: a Western fantasy of what Japan was like, or should be like.

Chemical Aftertaste

THE SEEDS OF THE JAPANESE STYLE fell on fertile ground, as England in the 1860s was in the formative stages of a major design revolution. Earlier in the century, the creation of bril-

liant new chemical dyes had set Europeans on an unrestrained color bash. The outrageously gaudy colors of mid-century are the result of the public reveling in a new technology. But by the 1860s, reaction was leading to renewed interest in natural dyes, re-created from medieval formularies by ardent anti-technologists such as William Morris. The soft natural tints in Japanese art meshed perfectly with this new English fascination with muted organic colors.

Geisha Gothic

T THE SAME TIME, the lavish overwrought ornamentation of mid-century was giving way to the flat stylized ornament championed by Charles Eastlake and proponents of the Gothic Revival. The flat, stylized motifs of Japanese ornament combined in a curiously attractive way with their Gothic counterparts. The combination resulted in an exciting new style highlighted by daring asymmetrical arrangements of pattern -- a Japanese convention that amazed and delighted the Western eye. While the English were giving birth to a new art movement, Americans were still preoccupied by the Civil War and its aftermath; yet, in a strange way, they were being psychologically prepared for the craze to come.

Son Of Manifest Destiny

IT WAS A POPULARLY held Victorian view that Civilization moved inexorably Westward. Particularly attractive to 19th-century Americans who saw themselves as next in line when the torch was passed by Brittania. An American corollary had it that here, Civilization, which began its long march in Asia, would attain its final fulfillment with the combined genius of Europe flowing to our Atlantic shores and the ancient genius of Asia rekindled through our Pacific portals. Few proponents of this theory would have guessed that young America was to meet her Oriental Destiny at a birthday party.

Fun In Philadelphia

AMERICA CELEBRATED her centennial with a magnificent bash in Philadelphia, to which the world was invited. The Japanese arrived, for the first time not as personal representatives of the Emperor, but under the guidance of the ministry in charge of foreign trade and promotion. Their exhibit, which required 50 railway cars to carry it across country, included a bazaar where excited visitors bought up quantities of original Japanese articles. These exotic wares became status symbols of the late seventies, and a nationwide demand for similar objects was created among status-conscious Americans.

ACROSS THE FAIRGROUNDS, the crowds were also being wowed at the English pavilion. The aforementioned artistic revolution of the '60s had picked up steam throughout the '70s; by '76 the quality of English design and manufacture was second to none. Of course, the exhibit included avant-garde designs heavily influenced by the Japanese. American manufacturers' representatives, who swarmed over the fair, could pick up the raw ingredients of the new style at the Japanese pavilion, and sophisticated recipes for its use at the English pavilion. The result was an almost instantaneous appearance of the Anglo-Japanese style in America.

THE EFFECTS OF THE FAIR on American design were dramatic and permanent. The craze for anything Japanese grew in intensity. The easy combination of Japanesque ornament with the newly popular "American Eastlake" style gave American manufacturers a bold new design vocabulary Soon the classic Japanese motifs of butterflies, cranes, cherry blossoms, rushes, chrysanthemums began to appear on silver, glassware, hardware, lighting, tiles, fabrics ... practically every item of daily use. Furnishings of faux bamboo and ebonized wood were enthusiastically received There was Anglo-Japanese food by the public. (sukiyaki) and Anglo-Japanese musical entertainment (Gilbert & Sullivan's Mikado: later,

Puccini's Madam Butterfly). Typography was particularly influenced, and asymmetrical layouts became popular in American publications.

BY THE 1880S an appreciation of things Japanese became, in America, the universally accepted symbol of Taste and Refinement. Few homes with any pretension to culture could be found that didn't contain some prominent display of Japan wares. Cost was no barrier here, as a simple paper fan on the wall of a miner's shack car-

ried the same unspoken connotation of good taste as did the elaborate Japanesque parlors on Fifth Avenue.

Prairie Pavilions

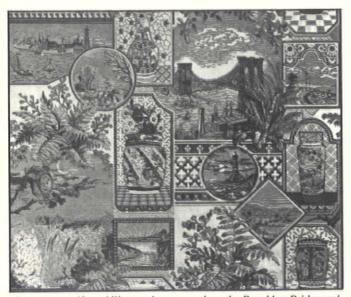
AMERICAN understanding of Japanese architecture and art broadened with continued exposure. The exquisite Phoenix Villa, erected at the Chicago World's Fair in 1893,

stood in stark contrast to its Beaux Arts surroundings, and left a lasting impression on both Louis Sullivan and Frank Lloyd Wright. The bold horizontal elements of Japanese archi-

tecture were a catalyst in the transition of style from the late Queen Anne to the Prairie School. The clear stamp of Japan could be seen on the West Coast in the idealized California Bungalows of Greene and Greene; ultimate examples of a building style that soon spread across the country. In the brief span of forty years, the

span of forty years, the
Japanese influence had become an intrinsic,
inseparable element of the American way of life.

Adding Your Own Touch Of Anglo-Japanese



Japanese motifs and Western images, such as the Brooklyn Bridge and Niagara Falls, were often combined in Anglo-Japanese wallpapers.

RECREATING AN ANGLO-JAPANESE room is a liberating experience, for here at last is a historical style where fantasy triumphs over purism...and you don't need to spend a fortune to create a great effect!

I WENT DOWN to a local California import emporium, Cost Plus, and found a collection of bamboo furniture, rush matting, lacquerware, blue & white china, lanterns, fans, parasols that would have sent an 1880s American into aesthetic hyperspace. All this at prices to match any budget.

THERE WERE NO "SET" ROLES for rooms in the Anglo-Japanese style back in the 1880s. But you can use this simple checklist to help you create a room that's fun to live in as well as truly evocative of the style:

Walls & Ceilings Garish colors were out; muted shades of ochre, olive, and russet predominated, often in combination with metallic gold, umber, vellum-like shades of cream and

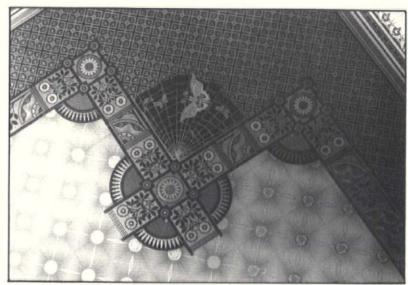
grey, and deep burgundy accents. Wa11paper was widely used in the popular dado/filling/frieze combination, sometimes combined with daring asymmetrical ceiling patterns. The ubiquitous wall-paper filling of the period featured small framed vignettes of Japanese or "oriental" objects, asymmetrically arranged, colored invariably in shades of dull olive often highlighted with gold. Embossed and gilded Japanese "leather" papers could also be found in upperclass homes. Woodwork was sometim-painted and then pinstriped; doors Woodwork was sometimes could be picked out in several shades of color, with the panels stencilled with bamboo or other Japanese motifs.

Floors Rush matting in imitation of tatami mats was popular, especially in the summer months. Eclecticism reigned however; "Oriental" rugs, real or imitation, were used to heighten the exoticism of a room.

Furniture Bamboo or ebonized furniture, often highlighted with gilt Eastlake incising, was most popular for the stylish Anglo-Japanese parlor. If you don't happen to have a room of such furniture sitting around, don't feel left out: Most practical Victorians made do with the furniture they already had, concentrating their efforts on other parts of the room.

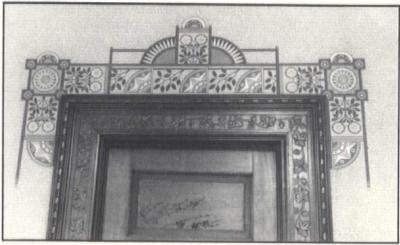


Inspired by Oriental blue and white china patterns, Tommi handpainted these designs on the doors.



Photos on this and the following page were taken from the Anglo-Japanese parlor created by Tommi Veirs, an Interior Design Restoration Consultant in Alameda, Calif. (above) To emphasize the a-symmetry of the five-sided parlor, Tommi 'pulled back' one corner and embellished it with decoupage wallpaper and a Japanese fantasy — this handpainted and gilded spider web.

(below) Doorways were decorated with decoupaged wallpaper.



Window Treatments This is the Anglo part of Anglo-Japanese. Shoji panels never seemed to have caught on, and the standard combination of roller shade (sometimes stencilled with Japanese motifs), lace curtains, overdrapes, and lambrequins predominated. Lambrequins were often "orientalized" for heightened effect. Many beautiful Anglo-Japanese designs were produced in both stained and etched glass.

Art No mere mania could separate the average American household from its cherished print collection of wide-eyed children, puppy dogs, and fluffy kittens, but these tended to peer out of ebonized frames with incised decoration. Of course a wide variety of prints of "oriental" subjects came onto the market in the '80s. The upper class proudly displayed their Japanese woodblock prints, scrolls, and screens. A folding screen was something of an ultimate object for the Anglo-Japanese parlor, and many Americanized versions were available.

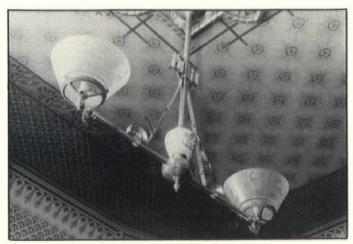
Accoutrements Blue and white porcelain, which started the craze, often appeared on plate rails in dining rooms or arranged on shelves in parlors. Ornamental Japanese tiles appeared in fireplace fronts.



Hinges, doorknobs, and doorplates were scattered with bamboo and birds. Lacquerware was commonly on display in the parlor, along with cloisonne. A tasteful wall arrangement of paper fans is one of the most common decorations seen in 1880s interiors. Paper parasols were commonly used as fireplace screens during the summer months. And stuffed herons and cranes were silent sentinels of taste.

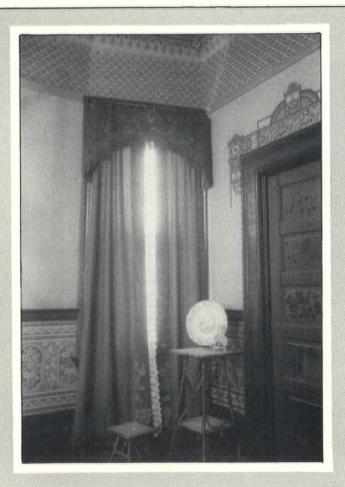
Lighting Immediately following the Centennial, gas and oil lamps with Japanese motifs appeared,

complete with glass shades often etched with sparrows and bamboo. The traditional Japanese lantern was also used, but typically as a decorative accessory. Towards the end of the century, a more sophisticated lighting style emerged, as typified by Tiffany's Dragonfly and Wisteria lamps.

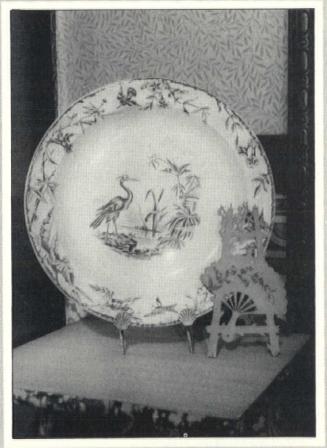


Glass shades were frequently etched with popular Anglo-Japanese motifs — cranes, cherry blossoms, etc.

The Author's fascination with Anglo-Japanese objects has, of course, manifested itself in his work: Recently added to his collection of late Victorian papers are several Anglo-Japanese wallpapers. Contact Bruce Bradbury at Bradbury and Bradbury Wallpapers, PO Box 155, Benicia, CA 94510. (707) 746-1900.



(left) This Anglo-Japanese parlor has a papered dado, wall fill, and frieze, and a band of hand-stencilling at the cornice. The designs on the lambrequin and drapes, inspired by the dado pattern, were hand painted by Tommi Veirs. (right) You can show your 'good



taste' by creating an inexpensive Anglo-Japanese touch in your house, i.e., displaying a blue and white china plate or a paper fan on a simple bamboo table. These items, and many others with an Oriental feeling, can be readily purchased from import outlets.



Dangers In Protective Devices



I WONDER if other readers realize that a defective lightning rod system is more dangerous than having no lightning rod at all? I just learned this after I had an expert examine my lightning rods. He explained that a defective system can actually attract a lightning bolt and leave it with no place to go but into your house.

IF YOU HAVE A NEW SYSTEM installed, make sure that the equipment carries the Underwriters Laboratories label. But even the best equipment is no better than the grounding system that the installer puts in place. So deal only with a reputable company.

- Daniel Taylor Barre, Vermont

(P.S. Period lightning rod systems are available through Victorian Reproduction Enterprises, Inc., 1601 Park Avenue South, Dept. OHJ, Minneapolis, MN 55404, (612) 338-3636--Ed.)

Proper Paint Brushes

A PAINT STORE CLERK gave me good advice the other day. He told me not to use pure bristle brushes in latex paint. The constant immersion in the water-based latex paint makes natural bristles swell as they absorb water. The brush can eventually come apart from this. Instead use nylon or polyester brushes in latex paint.

- Tom Cole Reno, Nevada

Stripping Hardware

I'VE HAD GREAT SUCCESS stripping brass hardware simply using wood ashes mixed with water. Just

take a pound or two of clean ashes and mix with three or four gallons of water in a plastic pail. Stir briskly to release the sodium and potassium hydroxides (most of the

ash is insoluble and will sink to the bottom, however.) Soaking the items overnight will usually loosen at least one layer of paint. Carefully remove them and scrub with a toothbrush under running water. I recommend wearing rubber gloves and eye protection for this purpose. To me, it is far superior to breathing paint fumes or even the odor of the various petroleum distillates available.

- David R. Sherk Almond, N.Y.

Caulking Made Easy

I'M TOLD that pros can get caulking to come out of a tube in a nice even bead and in its proper place.
I can't. The best tool I've found for smoothing out and clearing away the excess is my pointer finger. Typically though it gets so stuck up that its usefulness is diminished as the dry caulking on your finger sticks to the fresh caulking and makes an even bigger mess.

THIS IS MY TECHNIQUE: Take a small can and fill it with warm water for latex caulk or linseed oil for an oil-based caulk. Put the caulking on as usual but before smoothing, dip your finger into water or oil. Your finger will glide over the caulking without sticking and leave a smooth glossy finish. Keep a rag handy and periodically wipe any excess off your finger.

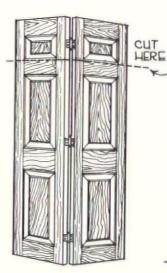
- Dan Miller Elgin, Ill.

Gold Leaf And Onions

I'D LIKE TO PASS ALONG a cleaning tip I learned from my mother. To clean grime off delicate gold leaf picture frames, rub the gold leaf gently with a soft cloth that has been dipped in the juice of a chopped onion.

- Elise Winter Elmira, N.Y.

Substitute Shutters



I WAS REMINDED that solid panel inside shutters are very expensive by the information and illustration from an article on historic windows in the OHJ. They are hard to find and have to be custom made unless old ones can be located, but these are also expensive. I solved the problem by using stock bifold doors with the small top panels cut off, making the shutters the 64-in. length my window openings required. I used regular door hinges to attach the shutters to the window frames.

- Sally Hunter Alexandria, Va.

Tips To Share? Do you have any hints or short cuts that might help other old-house owners? We'll pay \$15 for any short how-to items that are used in this "Restorer's Notebook" column. Write to Notebook Editor, The Old-House Journal, 69A Seventh Avenue, Brooklyn, NY 11217.

CISTERNS

If your house is more than 75 years old, chances are you may run across the remnants of a cistern. An old cistern can be a troublesome hole in the ground that you'll want to fill in. Or it can be a fascinating piece of history you'll want to restore to working order. This article tells how to do both.

HERE'S SOMETHING about a cistern that fascinates. Perhaps that mysterious hole in the ground conjures up fantasies of buried treasure, or activates some dormant archeological instinct. Or maybe it's a fascination with a household technology that everyone once knew, but we've forgotten. Whatever the cause, when someone says: "I've just discovered an old cistern," it stirs great excitement.

CISTERNS haven't been gone from the American scene for all that long, however. As recently as the turn of the century, cisterns were

Sectional View of Jug-Shaped Cistern

Here's a plan for a typical in-ground cistern as it appeared in the December 1894 issue of Carpentry and Building magazine. The details:

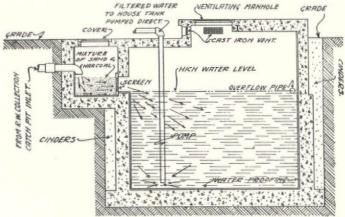
A. Rainwater inlet; B. Overflow pipe; C. Trap; D. Sediment basin;
E. Pump intake pipe; F. Brick wall (unparged) to serve as filter; G. Manhole; H. Flagstone cap. It's preferable to have pump intake pipe come through crown of cistern to minimize possibility of leaks.

featured in most homes. True, municipal water had arrived in most towns by then. But people continued to believe that no well-run household could exist without good, soft rainwater.

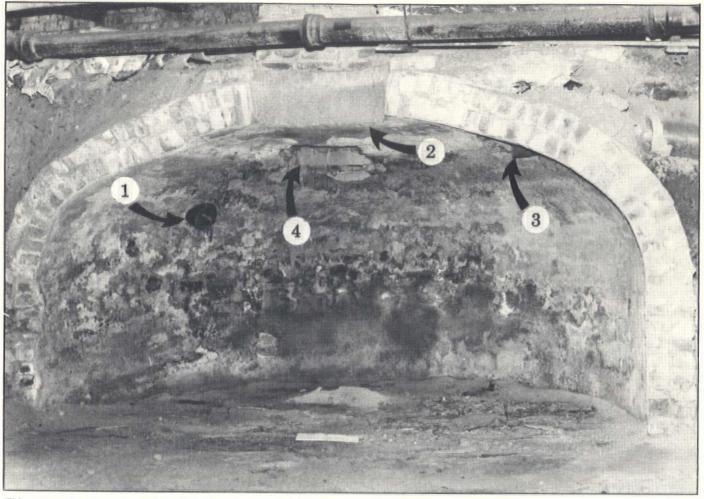
A CISTERN is a tank for storing rainwater for The rainwater collected in the household use. roof gutters is led to the cistern through connections to the downspouts. There were three basic types of cisterns: (1) Wooden or metal tanks located in the house or outside; (2) Masonry containment vessels in the basement built into the foundation wall; (3) Masonry lined pits located a few feet away from the In-ground cisterns provided the best protection against freezing, kept water at a constant cool temperature, and minimized damage from leaks. However, the in-ground cisterns were also the most expensive to build.

CISTERNS were made from many different materials: bricks, stones, or other masonry units laid in mortar and plastered on the inside with a waterproof stucco. For in-ground cisterns, there was a manhole that served as a port for routine maintenance and for getting water out by bucket.* Basement cisterns usually had a wooden cover with a trapdoor for access.

*A contemporary handbook advised that the cover on the manhole should have holes for ventilation. But the holes should be small "so as not to admit toads."



Cisterns continued to be widely used well into the 20th century. This plan for a poured concrete cistern appeared in Radford's Details of Building Construction published in 1911. Water from this cistern was intended for drinking. The filter compartment at the top left contained alternating layers of sand and charcoal. A hatch cover was provided so the filtering material could be replaced at regular intervals.



This extremely rare cross-section view of an in-ground cistern was taken by subscriber Craig Wolf. The cistern, built c. 1876 in Beacon, N.Y., was originally located a few feet from the house. However, an addition to the house resulted in the cistern being half inside the new

cellar. Solution: deactivate the cistern, cut it in half, and use it as a coal bin. Shown in the photo: (1) Rainwater inlet pipe; (2) Manhole in the crown; (3) Overflow pipe; (4) A later hole cut in the crown to serve as a coal chute.

RUE, not many people use cisterns today. But there are a few households that have never stopped using them. And a few old-house owners have begun to re-activate old cisterns--especially to eliminate washing problems caused by a mineral-laden water supply.

OTHER CISTERN OWNERS find rainwater preferable for gardening. It's cheap--and isn't spiked with chemicals. If you live far from hydrants, a full cistern can add fire-fighting safety. Most fire trucks carry a dunking hose (to draw water from ponds) that will also draw water from your cistern.

A CISTERN could even be used as the heat sink in a closed-loop water-to-air heat pump system. This depends on the size of your cistern and the size of your heat pump system; an engineer would have to evaluate each case.

BEFORE REACTIVATING a cistern, however, you'd better find out which bureaucrat is in charge of stopping you. You'll find cistern regula-

Special thanks to these readers for their contributions: Rozella Erbstein, Viola, III.; Pam Weber, Woodstock, III.; Craig Wolf, Beacon, N.Y.; and Barbara Gentile, New York, N.Y. Much of the material was collated and edited by Charley McWha, Locust Valley, N.Y.

tions under one or more of these areas: building codes, water ordinances, health regulations, public works regulations, wells, diffused water, or cisterns. Because cisterns are unusual today, don't expect any official to encourage you.

IT IS NOT SAFE to use a cistern for drinking water. In cases of dire necessity, it is possible to add chlorine to cistern water to make it potable. Consult local health authorities regarding safety and legal factors.

THE FOLLOWING SECTION is a case history of one old-house owner who has reactivated a cistern. She wants to remain anonymous, for reasons that will become clear.

Me And My Cistern

HEN MY HUSBAND AND I purchased our 1904 house, we found an old cistern in the basement--disconnected but intact. We originally had no intention of reactivating it, but decided to give it a try after discovering some of the other unappreciated amenities of old houses. I don't wish to be identified because our city building department said we couldn't do it. But we did it--and we're glad!

CONSTRUCTED of the same limestone as the foundation, our cistern occupies one corner of the basement. It's about 9 ft. square on the outside, and its walls come within 2 ft. of the cellar ceiling. The cistern is divided into two chambers by a curved brick wall, which functions as a filter. Rainwater flows into the larger chamber; the pump intake pipe extends into the smaller chamber. It holds 2,700 gallons, and with our annual rainfall of 30-36 inches we figured the cistern would be adequate for washing purposes.

TO SUPPLY RAINWATER, we fitted both of the existing cistern inlets with 6-in. tile elbows that we got from a plumbing supply store. Two of our gutter downspouts were connected directly to these elbows. For the cistern pump, we selected a Montgomery Ward ½-h.p. shallow well jet pump with a pressure-pack system. We were not totally happy with this setup, however, and when the pressure-pack ruptured two years ago, we replaced it with a Sears 19-gal. captive air tank.

OUR PIPING is arranged so that we can connect either the cistern or municipal water to our washing fixtures. A set of valves and piping unions assures total separation of the two water systems; the municipal water supply can never be contaminated with cistern water.

THE BENEFITS from our labors? Virtually any stain can be soaked out using only gentle soap and cistern water. Less detergent is needed in the washer. Dishes and windows dry spotfree, hair is softer, humidifiers and steam irons don't clog with minerals, and misting vaporizers don't leave a layer of mineral dust all over the furniture. I love my cistern!



The gutter downspout appears to be feeding into a house sewer connection, but the clay tile elbow is actually one of two inlets for the basement cistern. When the cistern was first reactivated, leaves washed down into the cistern and caused an odor as they decayed. Putting a nylon net strainer over the downspout where it enters the tile elbow solved the problem.

How To Fix (Or Fill In) In-Ground Cisterns

by James M. Smith, Anna, Illinois

N-GROUND CISTERNS are still used in our rural area to supply water for washing and other household needs. In my years of runing a building supply center, I've picked up quite a few tips on cistern repair, which I'll summarize in this short article.

FIRST, some important safety tips. Don't go down into an old cistern for a day or so after pumping out. Cisterns have been known to cave in soon after being emptied due to decreased pressure on the side walls. And when you do go down inside, ALWAYS leave a helper on top who can go for help in case of trouble. Also, there is a remote possibility that noxious gases could have built up at the bottom of the cistern. As the bottom sludge (sometimes up to 4 ft.) decomposes, it can give off carbon dioxide and other gases that can suffocate a person. The helper on top should keep up a steady conversation with the person in the hole. If there's any sign of slurred speech or disorientation, get the person out fast. If the person on the bottom should be overcome, the helper should NOT go down into the hole, but rather should summon help immediately from an ambulance or fire department with breathing apparatus.

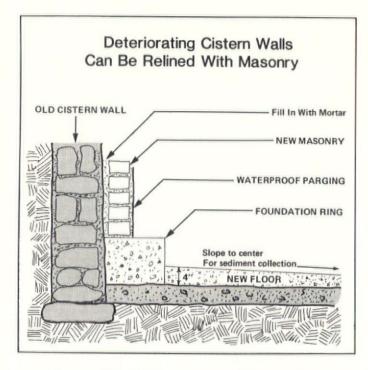
O START, remove the cover from the manhole and pump out as much water and sludge as your pump will handle. Any sludge that you can't pump will have to be hauled out with buckets. Hose down the sides of the cistern with a stream of high-pressure water to knock off any debris and loose plaster. Then pump out the wash water.

WITH HAMMER IN HAND, tap for hollow spots that signal loose plaster. Pull away all loose material. Inspect the crown for spalling and weakness. Often, the crown is damaged by overfilling that holds water against it. If the crown is in bad shape, exit promptly--and start to disassemble the crown for rebuilding. Observe, as you are tearing it apart, how the old crown was built. Build formwork inside the cistern to hold materials in place as the new crown is being laid up.

IF THE CROWN IS STABLE, continue your cleanup, scrubbing the walls with a stiff brush. Then you're ready to start patching. If the floor needs patching, fill small holes with a 2:1 sand:portland cement mix. If much of the floor is bad, you're best off pouring a new 4-in. concrete floor (more than 4-in. will be needed if you're also laying up new walls).

MALL PATCHES in the walls can also be made with the 2:1 mix. Larger holes should be filled with bricks or stones, held with the 2:1 mortar. Cracks should be chiseled out to 3/4 in. depth, then patched with 2:1 mix.

IF A FINAL WATERPROOF COATING is deemed necessary, you can use a commercial sealer such as Dryloc or Thoroseal. A cheaper alternative is two thin coats of a thick 2:2:1 slurry of portland cement:lime:sand.

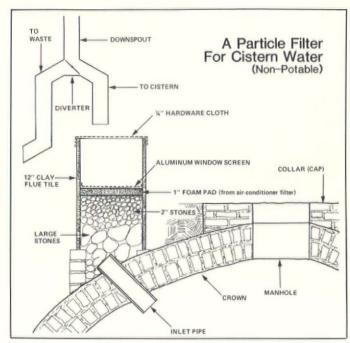


IF THE CISTERN WALLS are crumbling, and won't hold a patch, you can construct a new masonry liner inside the old walls. The new wall can be stone, brick, concrete block, or other masonry material. Plaster the inside of the new wall with two coats of a stiff 2:2:1 slurry of portland cement:lime:sand. Continue the new wall up to crown height and stop there if the crown is in good shape. If it's not, you'll have to re-build the crown as described before.

Proper Piping

HE INLET PIPE for the cistern pump should be at least two feet above the cistern floor. This allows a sedimentation basin, which is very important for water collected from a roof. Ideally, the inlet, outlet, and overflow pipes should pierce the cistern at the junction of the crown and wall, or through the crown. The overflow pipe prevents water from reaching the crown and causing masonry deterioration. The overflow should be connected to a dry well. Water inlet filters can be easily constructed to help keep gutter trash out of the cistern (see diagram).

IT'S A GOOD IDEA to install a diverter so that you can direct rainwater from the gutters into, or away from, the cistern at will. This device allows you to divert the first 10-15 minutes of a good rain away from the cisternas the rainwater sweeps the gutters clean.



The rainwater diverter (also called a "cutoff") shown in the diagram above is a hard-to-find specialty item. It's still made by a few sheetmetal manufacturers that fabricate gutters and other rainwater products. Two producers are: Galvan Manufacturing Co., New Albany, Ind., and The Billy Penn Corp., Philadelphia, Pa. These companies don't sell direct to consumers, but you should be able to order their products through your local building supply dealer.

Fill 'er Up!

S FOR OLD CISTERNS that are causing problems and are unwanted, there is only one
solution: Fill them in. If there has been
trouble caused by water collecting in the cistern, fill it with subsoil with a high clay
content. Do not use aggregate; water will
fill in between the spaces. Needless to say,
pump out the water before filling. The fill
will settle for 3-4 years, so you should have
more fill on hand. You can reduce slump by
vigorous tamping as each six feet of fill is
added. Don't fill the cistern with trash containing organic material. As the organics decompose, the fill will slump for many years.

IF THE CISTERN stands by itself, the crown may be broken into pieces and used for fill. The remaining void can be filled with clay-rich subsoil as above. When settlement has ceased, add topsoil to finish out the yard.

IF THE CISTERN WALLS form part of the foundation for a porch or other structure, then the crown should remain intact. Fill with soil as above. Keep checking and adding fill as required. When fill has stabilized, cast a permanent concrete plug for the manhole.

JAMES M. (Mike) SMITH is proprietor of the Anna Building Center in Anna, Ill. In addition to stocking cistern parts and pumps, Mike has accumulated a lot of cistern repair know-how. He can be reached at: The Anna Building Center, 201 East Vienna, Anna, Ill. 62906. Phone (618) 833-4221.



A Period Christmas

The Museum of the City of New York is selling Victorian Christmas cards that are truly enchanting. Their assortment of 25 different reproduction Christmas cards in various sizes and shapes cost \$7.95, plus \$1.60 for shipping. Their ornament selection includes 5-inch high, papier-mache Santas reproduced from 1850, 1890, and 1925 figurines (\$8.40 ppd. each). These and other products that mostly focus on the Edwardian era are shown in their catalog (\$1 for two years). The Museum of the City of New York, Fifth Ave. at 103rd St., Dept. OHJ, New York, NY 10029. (212) 534-1672.



Christmas tree ornaments that are reproductions of 1850, 1890, & 1925 designs.

Traditional tree ornaments that look handcrafted rather than glitzy and massproduced are still hard to come by. The

candleholder pictured here really has that old-fashioned quality. Reproduced from an 1867 New Jersey design it is fluted tin candle holder that hangs on a tree branch. The wire is counterbalanced by a clay ball, finished flat red, in mustard, blue, white, or shiny silver or gold. A box of six, postpaid, costs \$23.50. You should allow four weeks for delivery. Please note that these are strictly omaments: Don't



light the candles. Order from McLeach, Box 575, Dept. OHJ, Fitchburg, MA

01420. (617) 386-5323.



Flue Liner News

We thought we'd about covered flue liners in our September 1982 article. But subscriber Martin Wawrla's arguments for the Ventinox system persuaded us to add to the discussion.



Not only has he installed the liner in his own house, but he's also become the American representative for the Swiss system. He discovered this insulated. flexible metal flue liner - already well established in Switzerland - while trying to find a suitable liner for several chimneys in his own old house.

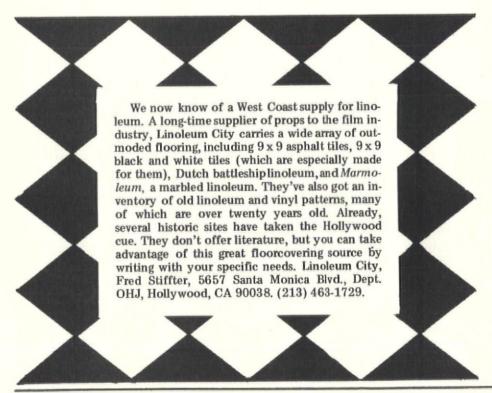
Without implying an endorsement, we would like to describe the new Boa-Ventinox liner.

Material is type 321 stainless steel. continuous (spiral) weld avoids mechanical connections between sections that can come apart during fires or repeated cleaning. The liner was tested at R.P.I.; then, in stringent chimney fire tests, by Boa themselves; finally the system was classified by Underwriters Laboratories in February, 1983.

The metal liner is insulated with a poured vermiculite fill; in old chimneys, the vermiculite is held in an insulating refractory slurry that also stabilizes the old masonry.

The service arrangement is notewor-Dealer-installers nationwide are sold a complete system, including technical training. Part of the contract is a free inspection after two months of operation. A non-obligatory recommendation is made for a cleaning schedule, which both dealer and customer must sign to assure mutual understanding. Ventinox headquarters gets a copy of the contract. So if the local dealer disappears, the original inspection report, installation details, and cleaning schedule are still on file with the company. And the 10-year warranty still stands.

The liner can be used with coal-, gas-, wood-, or oil-burning appliances and fireplaces. The company also offers a stove connector for safe installation of fireplace-insert stoves. For more information, contact Martin Wawrla at American Boa - Ventinox, PO Box 1743, Dept. OHJ, Albany, NY 12201. (518) 463-7284.



Stair Repair

Missing a newel post or baluster? Not all parts of old staircases can be replaced with standard parts. But Renovation Pro-

ducts can probably help they have the largest selection of stair parts available from a single source. And they've just introduced an installation in-



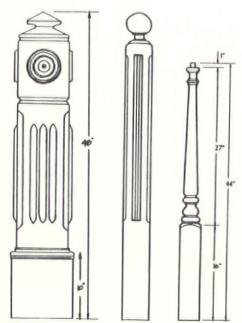
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struction manual. Complete with detailed line drawings, the manual explains in uncomplicated language how to replace a stair part. The manual is free with a

purchase from the company.

Newel posts are offered in 22 different designs including Victorian and turn-of-the-century styles. Newels begin at \$33 for a 3½ in. diameter; an impressive 12-in. newel costs \$418. They also carry 17 handrail styles, and 18 balusters in a variety of sizes. Most parts are stocked in hemlock. Other woods and custom designs are available, but you must allow additional time for delivery.

A new supplement to their annual catalog features their complete selection of stair replacement parts. You can order a copy along with their full millwork catalog for \$2. (If you've already got the company's catalog, you'll probably get a complimentary supplement in the mail.) Renovation Products, 5302 Junius, Dept. OHJ, Dallas, TX 75214. (214) 827-5111.

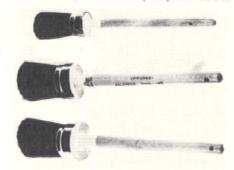


(left) A heavy, Victorian-style newel post; (center) A slender turn-of-the-century-style newel post; (right) one of numerous baluster styles — all offered by Renovation Products.

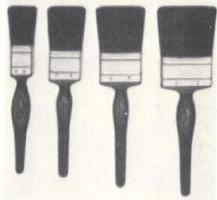
Unique Brushes

Technical editor Larry Jones came back from a boat show this fall touting the virtues of these exceptional - and unusual - paint brushes. Imported from Italy, these high-quality brushes are round and oval rather than rectangular. They're not stencilling brushes, however; actually, they are a throwback to fine finishing brushes common at the turn of the century and earlier. The round shape allows the brush to hold a large volume of paint. And by lightly and evenly rolling the brushes as they are drawn, a clean-edged swath of paint can be applied to moulded surfaces. (The brushes work great on window sash and muntins, for example.)

Made of pure china bristle embedded in epoxy, brushes range from a no. 10 (10 mil. in diameter) to a no. 50 round or oval (about 50 mil. in diameter). And prices range from \$8.45 to \$33.70; discounts are offered to the trade. The importer will sell direct to anybody and offers free literature. Coastal Trade, 601 South Andrews Ave., Dept. OHJ, Fort Lauderdale, FL 33301. (305) 467-8325.



English-made Hamilton brushes are a favorite of many craftspeople. Larry Jones also found the name of an American importer of these brushes. The Perfection brush, with pure china bristles set in durable vulcanized rubber, will do an excellent job with almost any finish for years and years. Sizes range from 1/2-inch wide (\$4) to 4-inch wide (\$30). Besides stippling brushes, wall brushes, and graining brushes, they carry unique angled brushes (one of which is pictured here) designed for cleaning and painting radiators - about \$16 each. For a free catalog featuring their complete line of 'finishing tools,' write Hamilton & Company, Ltd., PO Box 13212, Dept. OHJ, Roanoke, VA 24032. (703) 344-6400.



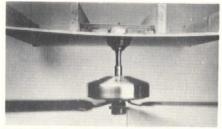
(left) Round brushes from Coastal Trade. (above) A 'Perfection' brush sampling.

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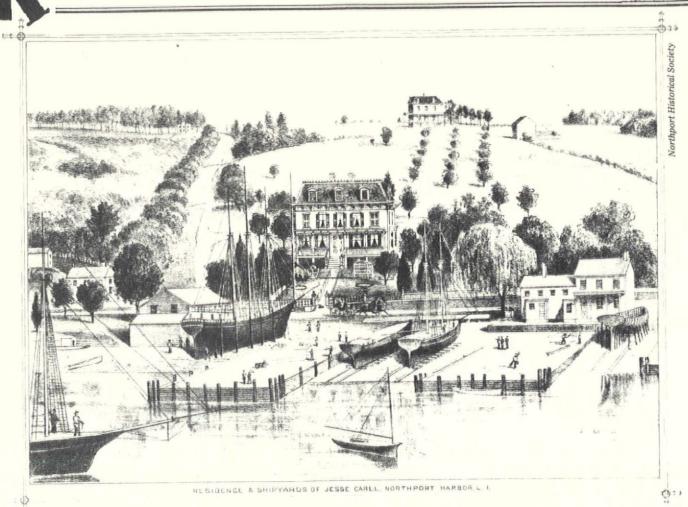
Now You Can Hang Your Ceiling Fan Between Joists

You've just purchased a ceiling fan, then discovered the nearest joist is six inches off from where you'd like to hang it! The Fan-Fast steel support is the answer. It can be expanded until its ½-inch steel points pierce nearby joists to provide permanent positioning. Inserted through a 4½-inch opening, the support is for joists on either 16- or 24-inch cen-

ters. The unit also includes a UL-approved electrical box and a sturdy hook for a suggested retail price of \$19.95. Free information is offered and Fan-Fast units can be purchased direct or through distributors. Lance Austin Enterprises, Inc., 3143 W. Tharpe St., Dept. OHJ, Tallahassee, FL 32303. (904) 575-0176.



The 'Fan-Fast' support is installed with the aid of a hammer through a ceiling opening.



HIS MONTH'S Remuddling "winner" is a real heart-breaker. Believe it or not, the apartment house pictured at right was originally the lovely mansard-roofed mansion seen in the drawing above. That drawing was made around 1860 by well-known New York artist Edward Lange. The house belonged to Jesse Carll, a famous shipbuilder from Northport, Long Island; those are his shipyards in the sketch.

AN ALMOST-COMPLETED SHIP is seen in the sketch, just below the mansion. The photograph was taken from where the front of that ship once stood. At first we couldn't believe the photo and sketch were the same house. The apartment-house facade has four window bays where the mansion had five. But if you were to walk around to the north or south side of the building, you'd see the original round-headed dormers. Same building, all right. But from this angle, there isn't even a ghost of its former elegant life.

THE REMODELING CONTRACTOR and owner undoubtedly had rationalizations for the "adaptive reuse." But the two representations of the scene speak for themselves. Northport was robbed.

Thanks to Tim O'Brien for sending the sketch and taking the photo.

Restoration and Maintenance Techniques For The Pre-1939 House

December 1983/Vol. XI No. 10/\$2.

The Old-House Journal

GLAZING

An Easy, Traditional Route To Rich-Looking Walls

by Nat Weinstein

ALL GLAZING, among the simplest of traditional decorative painting techniques, used to be quite common. But ask a painter to glaze your walls today, and he'll look at you as if you'd asked him to translate hieroglyphics. Things have, however, begun to change. Along with the growing interest in graining, stencilling, and marbleizing, the art of glazing is being rediscovered.

GLAZING IS THE PROCESS of applying a coat of translucent color to a painted surface, and then stippling, blending or wiping the glaze while wet to create a pattern in the glaze coat. (The process is called "scumbling" by English decorators.) Though subtle, a glazed wall looks quite different from a painted wall.

continued on page 229



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Chemical Crazy

Preservatives & Pragmatism

Some People today are spooked by chemicals, always searching for an accidental-poisoning victim to feed their paranoia. Worse, though, are the vast majority who still imagine that anything sold over the counter must be "pretty safe." I think if these trusting souls read the toxicologic information about, say, pentachlorophenol, they wouldn't ever get near the stuff again!

MYSELF, I'm no knee-jerk conservationist, self-righteously opposed to anything not made of spring water. My father manages a chemical plant. One of his products is halothane, an anaesthetic used in hospital operating rooms. Whereas ether can explode in a high-technology O.R. with electric bone saws, etc., halothane is non-explosive. When a patient comes out of surgery safe and sound, I doubt that his first thought is, "I wonder how the halothane manufacturer disposes of toxic wastes?".

THE POINT IS, industrial chemistry is "good" if it results in a product that you and I want, never mind its possible impact on the environment. We're all "against chemicals" but we buy chemical products daily, from synthetic vitamins to polyester clothes.

ENOUGH SAID in defense of Chemistry. It's up to each of us individually to decide whether we want to help create demand for environmentally hazardous substances. Let's be more selfish and talk about personal safety. In my opinion, old-house people are exposed to enough questionable materials already (many solvents, epoxy, polyurethane, lead paint...) We don't need to buy toxins in a can that we have to apply ourselves.

THE ARTICLE on page 225, a fairly technical one, gives an unbiased discussion of the choices we have for combatting wood decay. Here, I will offer some opinions.

• TO MINIMIZE the personal hazard and maximize effectiveness, buy factory pressure-treated lumber: (1) It works -- treated lumber does last longer than untreated lumber. (2) These days,

even wood is a finite resource:
Treating it for long life delays
the need for replacement. (3)
The chemicals are applied under
factory conditions, a controlled
environment where safe handling
can be more-or-less enforced.
There is minimum waste of the
material and an accepted procedure for getting rid of contaminated containers & effluent.

• I AM CONVINCED that the presence of penta and other highly toxic substances in off-the-shelf preservative treatments is usually unnecessary. It is quite literally a case of over-kill. Penta is terribly dangerous. Why use such a powerful killer when superficial brushing or dipping doesn't give long-term effectiveness anyway? You're not going to repel termites or stop decay with a quick on-site treatment...it's the water repellent characteristic you want, perhaps with mildew resistance.

I WOULD USE a WR (plain water repellent) or, if mildew and fungal growth were apparent, a WRP containing the "safest" preservative that'll do the job.

• WOOD PRESERVATIVES have their place, but they are not a panacea. For people who don't understand wood decay or who are stuck with bad design and construction, they provide peace of mind -- but the costs are high and the effect temporary. None of these materials will make up for construction that traps water, or an unrenewed paint job.

BY THE WAY, the Environmental Protection Agency has published notice that penta may be withdrawn from the market, asking manufacturers to show cause why it should not be. The EPA does not allow registration of any new product containing penta, but some penta-containing products which were already on the market before the EPA crackdown are still being sold.

READ THE "rot and preservatives" article in this issue, and decide for yourself. Use what you have to, but BE CAREFUL.

Patricia Doore

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Beginner's Pluck

Old-House Living ...

First-Time Restorationists In New Bremen, Ohio

By Donald Kuck

Julius Boesel is moving into his new building north of New Bremen. The building is one of the finest in the county and the site upon which it stands is the finest in the county. A view of the building while coming from Lock Two almost makes a person feel as though he were entering the suburb of a big city.

— The New Bremen Sun
October 24, 1895

N 1976, WE DECIDED to sell our three-bedroom, ranch-style home and search for an older house in our area--something that would be unique in character and style. We were told the Boesel house was for sale: a once-stately, 2½-storey Queen Anne, originally built by the local banker. It had 15 rooms, a full basement, separate carriage house and stable, and a clay tennis court in the adjoining side yard.

TAKEN ON A TOUR of the house, we saw the "remodelling" done by the current owners. Dark green shag carpet clung to the walls of the first floor dining room, living room, and par-

lor. The pocket doors and hallway walls had been removed, apparently with a chain saw. There were lowered ceilings with a stipple finish and a white-brick-veneer fireplace with canister lighting. The second floor had been converted into a duplex by yet another owner, sometime in the 1950s. Outside, the entire front porch had been removed. About 80% of the eaves and box gutters had rotted from lack of maintenance. The carriage house and stable had been deeded off and were not for sale.

PRIOR TO TOURING the house, we were told that there was a beautifully carved oak stairway in the main entryway. We decided that the sale of the property would hinge on whether

this stairway had been spared. It turned out to be just about the only section of the house that hadn't seen a hammer, saw, or paintbrush. Thus, we became the proud owners of the Julius Boesel house, green shag carpet and all!

NEITHER MY WIFE Jacqui nor I had any experience in major restoration or woodworking prior to purchasing the Boesel house. Realizing that we would be doing 98% of the restoration work ourselves, we settled on a ten-year plan, spacing out the projects by cost.

OUR FIRST CONCERN was to protect the house from further deterioration. This meant rebuilding the roof of the front porch, painting all the windows and gables, and installing storm windows. Later on, we'd rebuild the eaves and box gutters, rescue the interior, and complete the front porch.

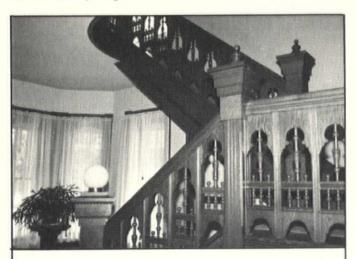
UNFORTUNATELY, our plan got off to a rather poor start. Before the first nail was driven, I was told the bathroom wasn't working properly. "A simple remedy," I volunteered, "would be to have the septic tank pumped and cleaned." We didand found it wasn't hooked up!

AFTER COMPLETING that unanticipated plumbing project, we were able to stay pretty much on schedule for the remainder of the year. The porches were partially reconstructed; we based our work on an old photo of the house. Window frames and sashes were repaired and painted, and aluminum storm windows installed. During the fall, ten wood storms for the large arched bay windows were



constructed in our basement workshop. We used plexiglass for two reasons, weight and cost. It hasn't yellowed or scratched, mainly because we use only water and soft towels to clean them. After installing the storms, aluminum and wood, we painted the frames black to match the original color scheme of the house.

INTERIOR RESTORATION was tackled on the basis of severity, necessity, and cost. Procrastination sometimes crept into the picture, too. There were those summers and winters (depending on the project) when the motivation just wasn't there. A person has to rest every once in a while, right?



The Boesel house had suffered severe outbreaks of remuddling-itis over the years. One of the few vestiges of Victoriana which was still intact was this elaborate staircase in the main entryway. Seeing this lonely survivor persuaded Donald and Jacqui to buy the house.

THE ROTTEN EAVES had large holes that permitted cold air to blow in, thus causing a substantial energy loss. Around our third year in the house, we finally got around to fixing them. Old-House Journal articles were very helpful when it came to replacing broken slates and working with the gutters. Working on 20-ft. sections at a time, I removed where necessary the old eaves and slate. Missing slates were replaced with extra slate acquired when one of our local churches was re-roofed.

WE DECIDED TO KEEP the box gutters. New sheet metal replaced those areas that had rusted through. I formed the new metal and placed it over the old; fearful of fires, I secured it with sheet-metal screws rather than by soldering. A fiberglass-and-oil-based pitch was then spread over the entire gutter, followed by a nylon webbing designed to keep the pitch from cracking during expansion and contraction. I applied a final coat and let it cure. After five years, we've yet to find a crack or leak.

WE LITERALLY TORE INTO the removal of the carpeting from the walls. We also pulled down the false ceiling, saving any lumber for use in the reconstruction of the hallways. The brick-veneer fireplace was removed with a sledgehammer. Once all the tearing out was

finished, we began to reconstruct the hallways. Drywall was used instead of plaster on lath-a matter of practicality. Careful attention was given to insure proper thickness, so we could get the drywall flush with the original plaster.

DUPLICATION OF THE WOODWORK was the next step. The former owner had removed all the baseboards and door frames; only the windows frames were intact. Finding duplicate woodwork seemed unlikely, and having it commercially made was too expensive. So we decided to make our own woodwork, using clear yellow pine (the same wood originally used). With a dado head attachment and interchangeable moulding heads, I began to experiment on the table saw with different cuts and angles. Eventually, I came up with a close facsimile of the original baseboards and frames.

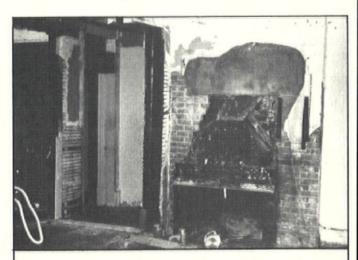
THE WINDOW FRAMES had been covered with several layers of paint over the years, and we wanted

to strip them and return to the original finish, varnish. At about this same time, we went to the City House Show in Chicago and saw a demonstration of the heat gun we'd read about in The Old-House Journal. We ordered one, and if a testimony is needed to verify the value of the heat gun we offer



the heat gun, we offer it now! It lived up to everything it's capable of doing.

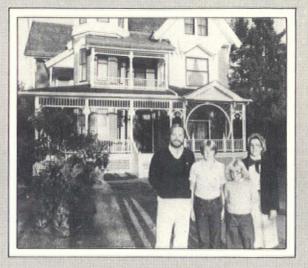
WE INSTALLED the new woodwork after we finished stripping. We stained both the new and old wood, using two different colors for a proper match. We then applied two coats of varnish, sanding between coats. Wallpaper with large flowered patterns was chosen--a close match to the bottom layers of paper we uncovered. The completion of these rooms took over a year. We lived mostly on the second floor, using only the kitchen and bath downstairs. Thank goodness for big houses! (I think.)



The road to recovery can look pretty gross. Here is the fireplace after the brick veneer was all sledgehammered off; the walls are again seeing the light of day after their long shagcarpet bondage. (Note how the hallway walls left of the fireplace were sliced off by the previous owner.)



Left: This is how the world saw the Boesel house prior to the Kucks' rescue operation. (The house looks really naked with-



out porches, doesn't it?) Right: The Kucks — Donald, Kris, Heather, & Jacqui — proudly pose with their restored beauty.

SING THE SAME LOGIC that had served us well so far, we chose to duplicate the porch spindles ourselves. A wood lathe was purchased from Sears, along with their Copy Crafter attachment. A sample spindle was made and installed in the duplicator. From this template, we turned over 500 spindles. (It was just like duplicating a key at the hardware store.) The spindles were nailed into position, and the entire section was pre-painted and then attached to the porch columns.

THE PREVIOUS OWNER had poured his new concrete floor over concrete block and added flagstone to the face of it. We weren't about to tear off the porch again, so we removed the flagstone and exposed the block. We then "hid" the block by painting it black and attaching a lattice over it, giving the appearance of the original porch. We painted the rest of the exposed concrete white, so it would blend with the rest of the trim.

CONSTRUCTING THE LARGE ARCH that frames the front bay window was the most challenging carpentry feat we attempted. On our basement floor, we plotted the exact dimensions of the opening that was to house the arch. Then a radius of the arch was drawn between the lines, duplicating the original shape. The 2x10s were laid over the radius, with proper angles cut to insure that the ends of each piece would butt together. A second layer of 2x10s was placed over the top of the first, making sure the ends didn't fall on top of one another. New radii were plotted, and the two layers were glued and screwed together, taking care that the screws didn't fall in line with the saw cuts that would be made.

OUTSIDE, a reciprocal-type saw was used to cut the arch. The screw holes and seams were filled with a water-based wood putty and the arch was completely sanded. The arch was taken to the front porch and installed, fitting perfectly into the waiting space. The remaining spindles were made and installed around the arch and then painted. Now, only the ceiling of the porch remains to be completed. We of

course want to duplicate the original, but haven't yet come across the proper dado head. Given time, I'm sure we'll find it.



This arch was built by first-time woodworker Donald Kuck. A lot of homeowners would be afraid to tackle such a project, but Donald's story demonstrates that all you need is careful planning, the right tools, and patience. (By the way, all those spindles are new, too.)

EIGHT YEARS AGO, we started our ten-year plan. When we bought the house, some said we'd maybe bitten off more than we could chew. Well, the house is now on the National Register of Historic Places, and the more frustrating portions of the restoration are--we hope--behind us. All this has been quite a family project: Kris, at age 13, turned out over half the spindles for the porches, and 9-year-old Heather has stripped wallpaper; both help hang wallpaper now.

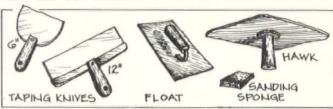
ARE WE FINISHED? Just about. Unless you count the third-storey rooms that could be redone. Then there's that extra bedroom we've been dying to tackle. And I wonder if it's possible to rebuild that tennis court again...

AVING OLD PLASTER doesn't have to mean hiring a plasterer. Damaged plaster can be removed and the holes patched with sections of drywall (Sheetrock).

Making The Perfect

THE MOST INTIMIDATING part of making a Sheetrock patch is not installing the Sheetrock, but rather taping the joint so that the patch blends in with the surrounding Even when home repair books suggest plaster. the practice, they merely say things like "cut to fit" and "feather the edges," then they leave you on your own. It is possible, with practice, to make an invisible patch -- and one that won't require extensive dusty sanding during the process. The techniques here show you how to do it right.

IT IS POSSIBLE to use a float instead of a 12in. taping knife, although it's a little awkward for the novice.



BEFORE APPLYING any joint compound, be sure to brush out loose bits of plaster. You may want

out of the compound. This step is more critical when patch-plastering (as opposed to

to dampen the raw edge of the plaster with a mister so that it doesn't draw the moisture

Making The Patch

 ${f R}^{ ext{EMOVE}}$ CRUMBLING PLASTER around the area to be patched. Cut the opening to a regular shape, preferably back to the nearest stud. The regular shape of the opening makes the Sheetrock patch easier to cut. And exposing studs enables you to nail the Sheetrock patch directly to the studs.

before squaring up PLASTER * STUDS T WASHERS & SCREWS (OPTIONAL) CRUMBLING. PLASTER WOOD

after squaring up

INTO

WOOD

LATH

DRY-

WALL

PATCH

(PRE-DRILL)

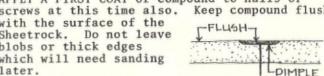
Old House Basics

SECURE THE PLASTER EDGES with wood screws. Use wood screws with plaster washers if the plaster is sound but its keys are broken. (See OHJ Oct. 1980 or Nov. 1983 for more on plaster washers.) Shim the Sheetrock as required to bring it up flush with the surface of the adjacent plaster. Cut a Sheetrock patch to fit neatly in the opening. The gap between the Sheetrock and plaster should be minimal so the tape will span the joint and avoid the possibility of future cracks. Nail or screw the Sheetrock in place. Nail heads or screw heads should be set slightly below the surface of the Sheetrock (dimpled), but without breaking the paper. SCREWS.

IF THE HOLE to be patched is small and misses nearby studs, the Sheetrock can be screwed to the wood (Nails won't hold.) lath. Note that the hole should still be cut out to a regular shape.

Put it on a little wider Center the joint tape over the length of the joint. Holding the 6-in knife at about a 45° angle, press the tape into the compound. Make sure there are no air pockets or voids under the tape. Then apply a thin smooth layer of compound over the tape. APPLY A FIRST COAT of compound to nails or screws at this time also.

pound over the joint. than the tape itself.



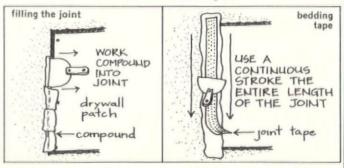
Taping Technique

THE TOOLS REQUIRED are a 6-in. flexible taping knife, a 12-in. flexible taping knife, a hawk, and a sanding sponge. Of course, drywall and joint compound, nails or screws, and paper or fiberglass-mesh tape are also required.

Bedding The Tape

"patch-Sheetrocking.")

PUT A SMALL AMOUNT of joint compound on the hawk and begin filling the joint between the Sheetrock and plaster, using the 6-in. knife. (Be sure to start with clean tools; bits of crusted compound will mar the job.) Work the compound into the joint to ensure that there will be no voids under the tape.



NEXT, apply a fairly smooth, heavy coat of com-

Keep compound flush with the surface of the Sheetrock. blobs or thick edges which will need sanding

Second Coat

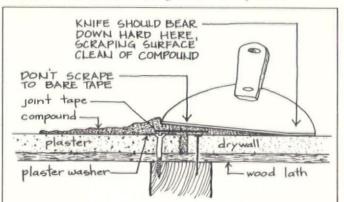
AS THE FIRST COAT dries, there will usually be some shrinkage and cracking in the compound. Invariably, there will also be ridges and pim-

Drywall Patch

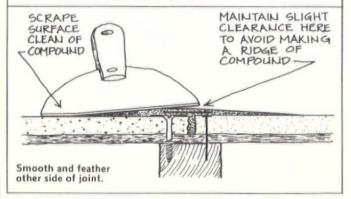
... without sanding

ples. These should be knocked off, using the taping knife as a scraper. Applying more compound over bumps and ridges will only make the surface more irregular.

APPLY THE SECOND COAT with the 6-in. knife, feathering it out 6 to 8 inches. "Feathering" means that the thickness of the compound should taper down to nothing at the edge. The way to accomplish this is to apply a generous coat of compound 6 to 8 inches wide. Then scrape the knife clean against the side of the hawk. Now smooth and feather the joint in long continuous strokes the entire length of the joint.



Smooth and feather one side of joint.



IN SMOOTHING and feathering the joint, much of the compound you just applied is taken away. So apply it in a generous coat and smooth to a thin, even coat. Try not to leave any voids or irregularities. If you make a mistake, simply re-apply and re-smooth right away.

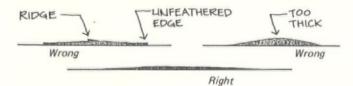
Third Coat

THE THIRD COAT IS A REPEAT of the second coat, only wider. You can tell when a coat is dry by the color. Wet compound is dark grey; dry, it is a grey-white. Compound in a nail-head dimple can be dry in half an hour, but a bedded tape joint may have to wait overnight before the next coat is applied.

ONCE THE SECOND COAT is dry, use the 6-in. knife to scrape off any ridges or bumps. Then apply the third coat of compound. But this time, use the 12-in. taping knife and feather the joint out 12 to 14 inches. When smoothing and feathering, start with the knife scraped clean of compound or, if necessary, with just a little bit of compound at the

center of the knife. Excess compound at the edges of the knife will leave ridges. Smooth and feather in long, continuous strokes.

AFTER THE third coat is dry, it may be necessary to touch up low spots with additional compound, or high spots by light sanding with a wet sanding sponge. Here's where those sanding sponges come in handy -- they're the block sponges with black sandpaper bonded to them, available at any hardware store. Use a medium-fine grit and rinse it out as necessary.



Wet sanding keeps down the dust. Once you get good at smoothing and feathering the compound as it's applied, touch-up will be very minor.

Hints On Using Joint Compound

IF YOU'LL BE needing more than two gallons of joint compound in the near future, it's a lot more economical to buy it in a fivegallon pail. The compound will last for



months if the insides are scraped clean and the top layer of compound is smoothed of peaks and valleys after each use.

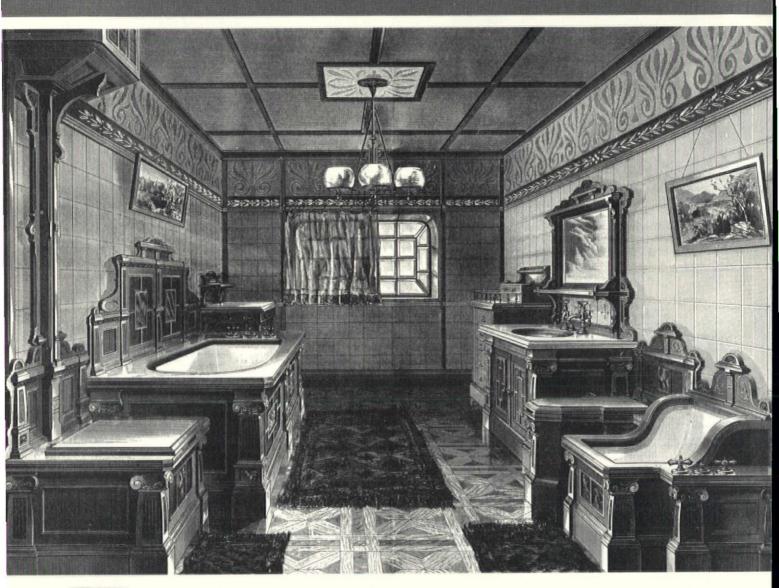
SCRAPE THE SIDES with a 6inch taping knife and throw the compound into the pail, rather than scraping it off the knife

back onto the side of the pail. For extralong shelf life, cover the top layer of compound with a piece of plastic wrap.

THESE MEASURES keep the compound from drying out and forming hard little crumbs that would mar and gouge up the compound as you tried to smooth it onto the wall.

ALSO...stick to standard brands of joint compound such as U.S. Gypsum and Gold Bond. I tried a cheaper department-store brand once; it was as elastic as bread dough, yet somehow oozed off the hawk like a giant amoeba.

For Creative Restoration of Old Houses



ERE IS THE ULTIMATE Victorian comfort station, an Aesthetic Movement throne room in the "Elizabethan" style, which was published in 1888 as the lead illustration to Mott's Plumbing, Catalogue G. Flush with art, it makes remote the world of wash-bowl and pitcher sets, chamber pots, and outhouses, even though they were common features of American life well into the 20th century.

For those about to restore a Victorian bathroom, documentation from the Mott catalogue provides advice, encouragement, and liberty for the creative restoration of the most per-

sonal of rooms.

It's OK to put down carpets where you want to. (Victorian floors were cold to Victorian feet, too.) If you want parquet flooring, you can now get pre-assembled 4x8-ft. sheets of it. It's OK to hang your favorite pictures for viewing from tub or toilet. (Victorians spent a lot of time there, too.) Use 6-inch ceramic tiles for the walls; mark the corners and windows with dark wood strips. Stencil a border and frieze. (See OHJ, June & July 1983.) Hang a reproduction gas chandelier from a stencilled square in the center of a plain ceiling marked by wood strips that meet the vertical strips around the window.

vertical strips around the window.

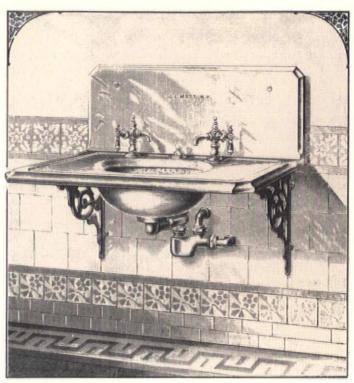
Plumbing fixtures in the "Elizabethan" style are intimidating, but other illustrations from the Mott catalogue suggest simpler alternatives from the architectural scrap yard or the cabinet shop. Attics, basements, and dark corners of antique shops may yield Victorian case pieces with missing marble tops or badly damaged wood tops easily converted to wash-stands

by the addition of a marble basin top.



IKE OTHER new technologies that entered the Victorian house, plumbing was beautified by furniture forms. Mott's "Cabinet Lavatories" took the familiar marble-topped wash-stand and substituted a sunk basin and a pair of faucets in place of the wash-bowl and pitcher. Above: a cabinet of 30x22 or 33x22 in. with a 12-in. splashback which easily could be reproduced. Below: a cabinet of 33x22 or 36x22 in. with a 12-in. splashback which has hardware readily available today in reproduction. It also has "swing faucets" that pre-date today's "washerless faucets." Similar cabinets might be found at auctions or antique shops and converted. Left: The "Elizabethan" example suggests that even mirror-backed bureaus could be converted.

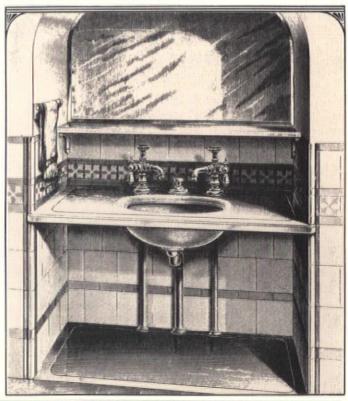




OT EVERYONE wanted to bury plumbing in cabinetry. The "Open Lavatory" was a more common alternative. Above: This could be made using salvage or reproduction brackets. Mott's were nickelor silver-plated brass, but cast-iron ones would do. Below: The "Open Recessed Lavatory" is a simple and elegant solution, strikingly fresh although nearly a century old. Both illustrations suggest handsome wall treatments using decorative tiles.

John Crosby Freeman

NEXT TIME: Bathtubs & Showers



Restorer's Notebook



A Good Spackling Tool

FTER MY HUSBAND put up the crown moulding, I was left with the job of spackling the finishing nails. A putty knife was too large, and just using my fingers was messy. A palette knife worked great. They're available at any craft store, and the blades come in different shapes, so you can find one that will fit your job.

--Marian Hall Decatur, Illinois

Cleaning Windows

AVING RECEIVED good advice from OHJ, perhaps I can return the favor with this tip about removing weather film from windows. The film is a result of metals in the air settling out on the window. Use Noxon to remove the metal film, then clean as usual. The metal cleaner will dissolve the film instantly.

--M. Daniels Flushing, New York

The Edge Of Wallpaper

o GET A CLEAN EDGE at the ceiling when wall-papering a wall, use a thin metal ruler. Push the ruler against the paper and butt against the ceiling for a straight line. Then, while holding the ruler firm against the wall, cut the paper with your blade. This not only assures an even line, but also keeps the paper from sliding or tearing if your blade is becoming dull.

--Eddie Maddox Lubbock, Texas

Curing Drooping Shutter Louvers



URING the summer, when I tried to keep the sun out by closing my shutters, breezes would cause the shutter louvers to drop down, admitting the undesired heat. Very annoying. After some experimentation, I made a little copper tab for each louver panel. The tab serves as a latch for the "control stick" on the back of the louvers. When I want the louvers open, I just swing the tab out of the way.

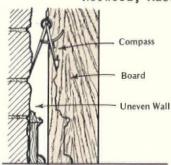
--Robert Costello Amagansett, New York

Scribing To A Line

Sometimes you have to cut a board so that it will fit up against an irregular surface. It is possible to do this by the cut-\(\xi\)-try method: making approximate cuts and then adjusting them as required by trial and error.

HOWEVER, there's a more elegant solution. Take the board and push it as close as possible to the irregular surface. Then use a compass to transfer the irregular outline to the board. The metal leg of the compass runs along the irregular surface, while the pencil leg of the compass traces the outline on the board.

--Emmy Botsford Norwood, Massachusetts



Toning Up Blotchy Shingles

ED CEDAR and pine shingles that have weathered in the sun for several years sometimes acquire a blotchy, uneven tone: Some areas are quite light, while others are almost black. This uneven weathering is quite unattractive. Even worse, the blotchy, weathered shingles looked terrible next to the new shingles on a recent addition to the house. Two separate contractors told me that the only way to blend the new shingles with the old was to put two coats of a heavy opaque stain on both sections. This amounted to a paint job, which didn't thrill me.

BY ACCIDENT, I discovered that if I scrubbed a blotchy shingle with a heavy-duty nylon bristle scrub brush, I could remove the top layer of wood fibers, leaving what looked like a fresh new shingle. With heavily weather-stained shingles, I would scrub cross-grain, then with the grain. With lightly stained shingles, scrubbing with the grain was sufficient.

SO I HIRED a neighborhood youth to scrub the entire house this way. It cost only \$350 in labor to get the stained shingles to look like new. Then I applied Cabot's bleaching oil to both the new and old shingles. It's an almost perfect match!

--Susan Shaw Kennebunkport, Maine

Tips To Share? Do you have any hints or short cuts that might help other old-house owners? We'll pay \$15 for any short how-to items that are used in this "Restorer's Notebook" column. Write to Notebook Editor, The Old-House Journal, 69A Seventh Avenue, Brooklyn, NY 11217.

HOW TO KEEP WOOD FROM





Wood Preservatives, Water Repellents, Rot-Resistant Species

and the Importance of Good Design

WOOD HAS NATURAL ENEMIES — decay fungi, termites, and weather. The first level of protection from decay is to use designs that guard wood from moisture. Wood with a natural resistance to decay can be used effectively above ground. But where wood is exposed to moisture or is used in important structural components such as sills, it needs preservative treatment. Water-repellent finishes help protect above-ground wood from weathering.

-from "Preservative Treatment of Wood For Farm Use," by Rodney DeGroot & Bruce Johnson, Univ. of Wisconsin Extension

HETHER YOU'RE FACED with rotted wood or merely paint that won't stick to weathered siding, this article will help. A lack of maintenance, bad construction, and use of lumber that weathers poorly all can lead to premature deterioration of wood. But using decayresistant lumber can delay deterioration and make up for neglected maintenance. Wood can come by such decay resistance naturally, or it can be chemically introduced. As we'll see, even existing wood can be treated with compounds that will repel water and mildew, slowing down the weathering process and making a new paint job last longer.

THIS ARTICLE is about protecting wood from water and subsequent weathering and decay. First, a word about termites: These pests are usually easier to spot than early rot because they leave telltale evidence. They won't eat pressuretreated wood; they will, however, occasionally build shelter tubes around it to get at untreated wood. It helps to remove wood scraps from a job site, to treat the soil, and to use lumber commercially treated with preservative. Regular inspections are a good idea. If termites are present, soil treatments are usually successful. For more information, see OHJ, June 1981.

Natural Decay Resistance

Some species of wood contain "extractives" that make them resistant to fungal and insect attack. Old-growth redwood, Western red cedar, some species of cypress, and to a lesser extent Douglas fir have been the main types of decay-resistant softwood lumber in the U.S. Untreated, these woods are best used in

above-ground applications, in low to moderate decay-hazard areas.

UNFORTUNATELY, the decay resistance of these woods varies even within a species, depending on the presence of sapwood (only the heartwood is resistant), the age of the tree, and the part of the country where the tree grew. As old-growth forests are replaced with fast-growth new stands, decay-resistant softwoods are becoming less resistant and more expensive. But naturally decay-resistant wood can be treated with a non-toxic water repellent. The combination is a good way to get above-ground decay resistance without using toxic preservatives. Typical outdoor applications for decay-resistant wood include porch railings, turnings, scrollwork, and stair parts. Where wood will contact soil, a preservative treatment is necessary.

Wood Treatments

HEN WOOD is allowed to soak up moisture, it will swell. Shrinking occurs on drying, causing joints to open up, and also causing cracking, warping, and eventual paint failure. Worst of all, decay fungi and mildew may begin to feed on the wet wood and the paint, as long as the moisture the organisms need is present. Both WR and WRP solutions give wood the ability to repel liquid water such as rain or dew, by introducing a waxy substance into the wood.

MANY PEOPLE CONFUSE WRs and WRPs. If the local lumberyard sells only one or two brands, you may not even realize you have a choice. Simply stated, water repellents (WR) are non-toxic or low-toxicity preparations that slow down wood's tendency to absorb water. A water repellent becomes a water-repellent preservative (WRP) when a chemical preservative is added. Water repellents lack the ability to protect wet wood against decay and mildew because they lack a fungicidal preservative. A WRP has the ability to protect wood from water, but also from mildew and, if the treatment is more than superficial, from decay and insects as well. They are, however, toxic in manufacture and during application.

Take A Field Trip

To appreciate how wood weathers and decays in your area, visit a really run-down house (we hope it's not your own!). Stand back and try to visualize how water runs off the structure. The most deteriorated wood elements are those that trap and hold moisture such as fragile scrollwork, brackets, and complicated joinery. Serious rain wetting and subsequent decay often begin at construction joints and exposed end grain. Horizontal surfaces that are slow to shed water tend to weather poorly. Uncontrolled run-off can decay even vertical surfaces. See if you can locate areas where splashing water has affected wood and look for soil in contact with structural or trim parts.

Understanding Decay:

1 Exposed end grain decays first (barge boards, finials, balustrades, cresting, brackets, quoins, and newels): Dip/soak or brush-treat existing wood, or use pressure-treated new lumber.

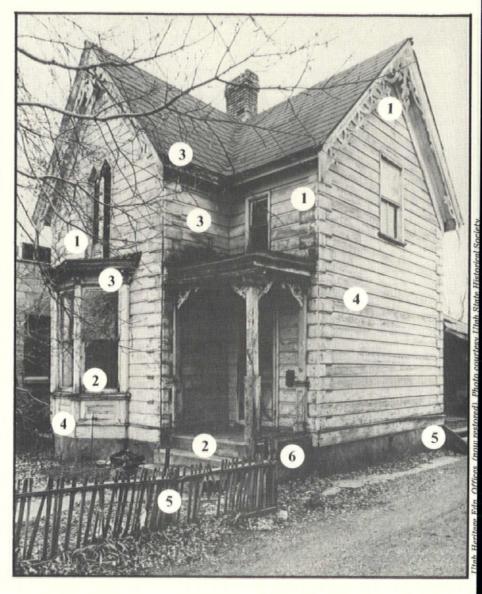
2 Horizontal surfaces (window sash, sills, porch floors, steps, and mitered trim): Dip/soak or brush-treat existing wood; or replace with pressure-treated lumber.

3 Uncontrolled run-off and splash-back (cornice moulding, porch roof, siding and lower porch): Install gutters and flashing, dip/soak or brush-treat existing and new lumber.

4 Paint, caulk, and sealant failures (joints and seams): Dip/soak or brush-treat bare joints; caulk and maintain paint film.

5 Wood in contact with soil (former porch supports, lattice and trim, newel posts and fence): Lower grade level, or alter design, or select pressure-treated lumber for ground use.

6 Poor design and maintenance (concrete stoop poured against baseboard allows termite access and traps moisture; vines also cause moisture and insect problems): Vigilant inspection and maintenance is always necessary.



water repellents (WR)

WATER REPELLENTS (also inaccurately called waterproofers and exterior wood sealers) are increasingly found on retail shelves. Some brands are paintable immediately after drying, some are not, so be sure to read labels if you intend to paint. Paintable WRs include Thompson's Water Seal and Weldwood Waterproofing Sealer. Non-paintable ones include CWF-Clear Wood Finish, Weldwood P.A.R. Clear, and Woodlife Clear Wood Finish. (Non-paintable WRs can be painted after a period of outdoor weathering.)

BECAUSE NO TOXIC COMPOUNDS are included, it's safe as well as economical to make up home-brew batches of water repellent. Forest Products Labs developed this now-familiar recipe for a cheap, safe, paintable WR:

1 oz. paraffin wax (melted or shaved)
1½ cups boiled linseed oil
OR

3 cups exterior varnish Mineral spirits to make 1 gallon It's easy to turn the recipe above into a WRP by adding 1-3/4 cups of 40%-penta solution or another preservative. (Concentrated penta solutions are not available to individuals in some states.)

water-repellent preservatives (WRP)

BRAND-NAME WRPs are available over the counter at hardware and paint stores and at lumber-yards. The chart, next page, shows some of the common brand names and the preservatives they contain. When they are purchased as pre-mixed WRPs and applied on site, application methods include brushing, dipping, flooding, or spraying (that last is not recommended). All of these methods are explained in detail in the box on page 228.

BESIDES OVER-THE-COUNTER preparations, you can buy commercially pre-treated lumber. This is wood which has been factory-treated with a preservative chemical. Often referred to as "pressure-treated lumber," it is decay, mildew-, and insect-resistant. The chemical can be introduced in a petroleum solution, or

	Firm	Brand Name	Preservative †	Paintable	Ground Contact	Uses & Comments
ts		Wolman	CCA (Chromated Copper Arsenate)	Weather *	Yes	For decks, railings, porch supports. Leach resistant. Paintability depends on moisture content of wood. Light green/brown color fades.
Treatments	Koppers	Cellon	Pentachlorophenol	Weather	Yes	For utility poles, rail ties. Paintability questionable. Kills plants. No color.
reati	J.H. Baxter	Chemonite	ACA (Ammoniacal Copper Arsenate)	Weather	Yes	For posts, poles, & decks. Good protection against decay & termites. Leach resistant.
	Rentokil	Supa-wood	CCA (Chromated Copper Arsenate)	Weather	Yes	For decks, porch supports, & stair carriage. Retreat cuts. Light green/brown color fades. Odorless.
ommercia	Internat'l		Creosote	No	Yes	For utility poles, rail ties. Wood resists moisture & checking. Brown & black discoloration of wood. Odor.
mm	Paper Co.		Pentachlorophenol	No	Yes	For posts & poles. Color depends on treatment. Weathers well.
Co	Crown Zellerbach		CCA (Chromated Copper Arsenate)	Weather	Yes	For decks, porch supports, & stair carriage. Brush treat cuts. Light green/brown color fades.
	United Gilsonite	ZAR	Iodo-propynyl-3- butylcarbamate	Yes	No	Effective against decay & mildew. No insecticide. Allow 72-hr. dry- ing period before painting. Clear to light yellow tint.
	W.M. Bar Co.	Seal-Treat	Pentachlorophenol	Yes	No	Allow to weather maximum 6 months before painting (oil or latex). Life of material, 3 years for 1 coat.
ions	Chapman Chem. Co.	Woodguard	Copper-8-Quinolinolate	Yes	No	For exterior wood shingles, interior log house walls (to fight mildew & mold). Mild preservative, safe near food (ideal for chop blocks).
Applications	Samuel	Cabots Clear Wood	Zinc Naphthanate	Weather	No	Clear fungicide, for exterior decks, rails, trim, and millwork. Also for tarps, rope, and fabrics (outdoor use only).
App	Cabot Co.	Colorless Creosote	Creosote in light oil	Weather	No	Good insect, mildew, & decay resistance. Colorless. Avoid contact with plastic. Can be painted only after 2 years of weathering.
Site ,	Darworth Inc.	Cuprinol 20	Zinc Napthanate	Weather	No	For floors, decks, & rails. Colorless. Use oil-based paint only.
On S	Roberts	Woodlife II	Iodo-propynyl-3- butylcarbamate	Yes	Yes	Clear. Ideal to paint or stain. Allow 24-hr. drying period before applying paint; 48-hr. before stain; 3-6 months before stain.
O	Industries	Woodlife	Pentachlorophenol	Yes	No	Clear, water reducible oil, for all exposed wood including millwork and trim pieces.
	Savogran Co.	Woodie Penta	Pentachlorophenol	Weather	No	Good insect, mildew, & decay resistance. Clear; may be pigmented to impart color to wood. Controls shrinkage, warpage, & checking.
	Zehrung Corp.	Pentaseal	Pentachlorophenol	Yes	No	Good primer for paint. Seals pores of wood, therefore not stainable.

The above is a random list of firms and a partial listing of their products. Should you have questions concerning the appropriateness of a product for your particular application, most manufacturers can be contacted directly by phone (see label). Or your dealer may be able to answer your questions.

* 'Weather' = Treatment requires a period of outdoor weathering before it can be painted or stained. Time varies with product, from less than 6 months to two years or more.

† Other common preservatives include: ACC (Acid Copper Chromate), CZC (Chromated Zinc Chloride), and FCAP (Fluor Chrome Arsenate Phenol).

it can be waterborne. Only the "oil" treatments (creosote or penta, usually) have water-repellent characteristics.

MUCH OF THE PRE-TREATED WOOD available today has been treated with a waterborne salt, however -- usually a copper or zinc compound. While waterborne preservative treatments do not impart water repellency, their advantages are freedom from odor, a clean surface finish, and paintability.

CREOSOTE (or coal-tar creosote) is an oldie-but-goodie. Usually an unpaintable black or brownish oil, it is easy to apply, permanent, and toxic to wood-destroying organisms. But it's smelly and can harm plants. Wood can be factory pressure-treated with creosote, or it can be applied at the site. It's used for fence posts, rail ties, and telephone poles.

PENTACHLOROPHENOL solutions (PCP, "penta") bought over the counter contain 5% penta by weight. Heavier oils used for some treatments stay in the wood longer but make it unpaintable. Penta forced into the wood with volatile solvents leaves a paintable surface. Penta solutions, as mentioned above, can be purchased for on-site application.

WATERBORNE SALT TREATMENTS leave treated wood with a clean and odor-free surface; most are paintable. Depending on the treatment method used, different chemical changes take place in the wood which result in either a leachable or leach-resistant condition. The waterborne salts are the treatments that are designated by letters which stand for the active chemical (CCA, ACA, ACC, etc.) If you buy factory-treated wood for above-ground use, you'll probably be buying wood treated with one of these waterborne salts. In general, copperand zinc-salt treatments have lower mammalian toxicity than penta solutions.

DEPENDING ON THE chemical used and the extent of treatment, pre-treated lumber is further designated as "above ground," "ground contact," or "FDN." Above-ground treated lumber should not come in contact with soil or constant wetting. Sill plates, porch rails, window hoods, window facing trim, window sills, quoins, column bases, and other millwork that sees a lot of weathering are best replaced (when necessary) with lumber treated this way. Some exterior structural supports such as porch floor joists and step carriages will probably also last longer if pressure treated.

Treating Wood At Home

YOU CAN APPLY a WR or WRP solution to new lumber as well as to wooden elements already in place on a building. On-site applications are superficial, and do not provide the long-term rot and termite resistance that commercially-treated wood does. In low-moisture conditions, however, they can be an adequate, inexpensive way to inhibit mildew growth, to inhibit absorption of water by the wood, and to extend the life of the paint job that follows treatment. Wooden house parts that are only occasionally wetted, such as siding, window frames and sash, turnings and scroll work, can be protected by on-site treatment, provided they are not in contact with standing water or soil.

Previously painted wood, of course, would have to be thoroughly stripped of all finishes for WR or WRP treatment to work. Keep in mind, too, that if decay is already present, in-place treatment will seldom arrest it.

Personal safety has to be considered when it comes to on-site treatment. All precautions on the container labels should be rigorously followed, including those that pertain to the safe disposal of empty cans. If compliance with safety measures might prove difficult, it might be a better idea to buy factory-treated lumber, or to stick to non-toxic WR solutions.

COMMON METHODS for on-site treatment are dipping, brushing, flooding, and spraying.

DIPPING can be carried out in troughs or vats, with a drainboard to recapture excess solution from the pieces as they dry. Disassembled parts can be dipped a minimum of 30 seconds. Assembled units such as window sash must to left to soak for at least three minutes. Allow at least two days drying time for wood dipped more than 10 seconds before painting or installing. Don't forget to thoroughly re-treat holes or cuts made in the lumber.

BRUSHING on WRs and WRPs is less effective than dipping — the wood simply doesn't absorb as much. Nevertheless, brushing is the easiest method, and is adequate for siding or other wood surfaces that will be painted and aren't in high decay-hazard areas.

FLOODING a surface can be accomplished by using a pump-type oil can, a dish-detergent squirt bottle, or a sponge filled with solution. Open joints should be flooded with solution, which is then thoroughly worked in with a brush. After the solution has dried, remember to caulk the joints.

SPRA YING isn't recommended for on-site work, especially when an ingredient is a toxic preservative. Not only is spraying the most uncontrollable and therefore the most dangerous method of application, but it is also the least effective.

TWO OTHER effective preservative treatments, often overlooked, are excellent for treating wood which is already in place. These treatments, which allow the chemicals and water repellents to soak in, are especially useful for old houses with their great number of open joints and decorative woodwork. One method uses a cotton



string to "wick" the preservative solution into the joints by running the string from the container of solution into or around the joint. The second treatment is penta grease, available in some parts of the country. The grease should be spread on top of the wood or put in holes bored into the wood. It is effective where limited surface cover-

age is needed. With both of these methods, up to several days is needed for complete absorption — the long soak is what makes the methods effective. But caution must be exercised, as these preservatives will be exposed to possible human or animal contact for hours or days.

"ABOVE GROUND" lumber is usually pressuretreated with a waterborne salt such as CCA, ACA, ACC, CZC, or FCAP.

"GROUND CONTACT" lumber is used in more severe conditions where wood is actually in contact with soil or standing water. Fence posts and porch supports usually last longer if built from such lumber. The most thorough pressure treatment is labelled "FDN" (foundation). It is for below-ground use.

NOTE: Even in commercially treated wood, the preservative doesn't often penetrate all the way through. So you must re-treat all cuts and bores in the wood, as these expose end grain. Brush these areas with preservative.

Precautions

PRESERVATIVES ARE FUNGICIDES--and, in fact, pesticides. Each of the chemicals used is to some degree toxic to plants, animals, and humans. Pentachlorophenol is generally considered to have the greatest human toxicity; it should never be used indoors, or on unpainted wood which will come into human contact. Penta can be absorbed through the skin, as well as inhaled or ingested, and it's cumulative over a lifetime. Your body can't get rid of it. So it's very important to wear gloves when handling it. Scrupulously follow all suggestions for safe use on the label.

THE COPPER AND ZINC SALTS, while not as toxic to humans as penta, are also fungicides and should be handled with respect. With any of

these preservative chemicals, don't spray without special equipment. Don't breathe the dust created when you cut treated wood. Wear protective gloves, an apron, and a face shield when you are treating wood or handling wood that is still wet with a preservative solution. Immediately wash your hands and skin areas with soap and water if they've been wetted by a preservative solution.

ONE LAST CAUTION: Whether knowingly or not, some people have burned wood scraps that had been factory-treated with a preservative chemical. This is an extremely dangerous practice. In some documented cases, whole families have been severely poisoned by copper and arsenic compounds, among others. DO NOT BURN treated wood. And don't dispose of treated wood scraps in a place where unsuspecting people may pick it up as kindling.

This article was compiled and written by the Editors of The Old-House Journal. Much of the material is based on studies done by Forest Products Laboratories. Among their publications that are of as much interest to users of preservatives as to scientists:

Selection, Production, Procurement, & Use of Preservative-Treated Wood. General Technical Report no. FPL-15.

Wood Finishing: Water Repellents & Water-Repellent Preservatives, by Wm. Feist & Edw. Mraz, Research Note no. FPL-0124.

These as well as Wood Finishing List of Publications no. 83-009 can be ordered from Forest Products Labs, PO Box 5130, Dept. OHJ, Madison, WI 53705. Always enclose 50 cents or stamps. Our special thanks to Dr. William C. Feist and Lee Gjovik of FPL.

Thanks also to Daniel L. Cassens of Purdue Univ. and Edward Duke of the American Wood Preservers Institute.

Glazing walls con

continued from page 215

THE GLAZE COAT adds depth--imparting a softer, richer finish that reflects light differently than paint. Best of all, a glazed finish disguises minor wall defects and doesn't show dirt and fingerprints.

GLAZING COATS of various kinds have been used by artists and decorators for centuries. But it was in the 1920s and '30s that glazing reached its ze-Tiffany glazes and hunnith. dreds of other specialty finishes decorated both homes and public buildings in the post-Because glazing Victorian era. is such a flexible technique, it's possible to create one type of glazed finish appropriate for a 1912 Bungalow, and another that would be at home in a formal 1925 Colonial Revival home.

No lap marks where sections join Edge must stay wet and workable until Section 3 is glazed and stippled Stippled glaze Stippled glaze (Section 1) (Section 2) Wall already painted with ground coat Freshly applied glaze ready to be stippled Wet edge 1st Section--2nd Section->

Glaze A Wall In Small Sections To Avoid Lap Marks

Glazing Basics

RTISTS LONG AGO discovered there are many ways to modify color. For example, while blue and yellow always equal green, it makes a difference whether the blue and yellow are mixed before being brushed on, or whether the light reflected from a yellow ground coat is allowed to filter through a glaze of blue. The order of applying colors also makes a difference. The green you get from a blue glaze over a yellow ground looks different from that created by a yellow glaze over a blue ground.

THE PATTERN in the glaze coat can be manipulated to simulate natural materials such as marble, leather, and wood. (Graining is merely one special type of glazing.) You can also use glaze coats to mimic the aging process on furniture and other objects. The most popular type of wall glazing, however, is where the glaze is used solely for its decorative effect, and not as an imitation of anything else.

THERE ARE THREE BASIC techniques for manipulating the glaze coat: striating, stippling, and mottling. Striating is the dragging of a dry brush (or rag, sponge, steel wool, etc.) in parallel strokes over the wet glaze. When stippling, you break up the wet glaze with the ends of a dry brush applied in a pouncing motion. In mottling, you blot the wet glaze with a pad made of rag, tissue paper, cotton waste, sponge, or similar material. There are many combinations and variations of these techniques.

AP MARKS are the biggest problem for beginners. Lap marks occur when the glaze sets faster than the surface can be coated and manipulated evenly. These difficulties are greatest on large continuous wall surfaces.

You have fewer lapping problems when glazing something like a panelled door, because you can glaze one section at a time. The natural breaks in the surface disguise the junction between glazed areas.

THE SECRET to avoiding lap marks is to keep a "wet edge." For example, in stippling a wall, the glaze should be applied and stippled in vertical sections two or three feet wide. Start at the top and work down. When you finish the bottom of the first section, the edge of the top portion should still be wet.

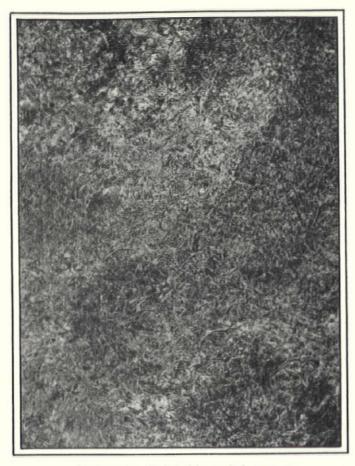
GLAZE FORMULA

Here's a formula for a glaze that will work for tissue paper mottling, stippling, or steel wool striating:

- 1 quart Penetrol
- 1 quart varnish (flat varnish for a dull finish; gloss varnish for a shinier finish)
- 1 pint paint thinner
- Color to suit

This should be a sufficient quantity for an average size room. The glaze can be colored with universal tinting colors, or colors ground in oil. (These are colorants used for tinting paint, and are available at any well-stocked paint store.) Colors-in-oil can be added directly to the glaze mixture. Universal tinting colors, however, should be mixed with a little full-strength varnish before adding to the thin glaze mixture.

There are also commercial glazing liquids to which all you add is the color. Untinted, these glazing liquids vary in color from thick golden honey to white hair cream, but they dry transparent on the wall. They can be used full strength, but many decorators prefer to thin them with mineral spirits. Glazing liquid will be found at paint stores that cater to professionals. Two mail-order sources are: Wolf Paints, 771 Ninth Ave., New York, NY 10019 (212) 245-7777; and Behlen Bros., Rt. 30 N., Amsterdam, NY 12010 (518) 843-1380. Other sources will be found in the OHJ Catalog.



Glazing color stippled with a wad of newspaper.

That way, you can evenly blend in the glaze in the second vertical section without lap marks (see diagram on preceding page).

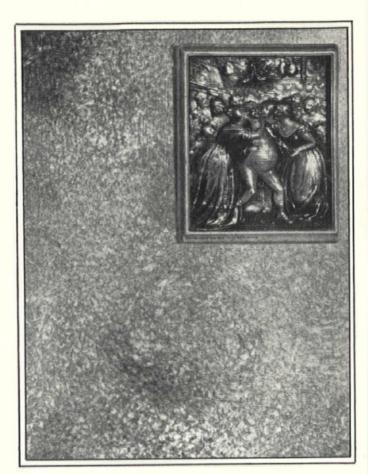
DON'T SELECT A WALL as your first glazing project. Instead, practice on an old piece of furniture such as a tabletop, or on a big piece of plywood. Paint the practice surface with the ground coat you intend to use on the wall. Then you can experiment with various glaze colors and mottling techniques. Any experiments that don't work out can be washed off with mineral spirits.

Tissue-Paper Mottling

ISSUE PAPER, the kind used in wrapping gifts, can be used for mottling glaze. Tissue paper can be purchased in 20 x 30 - inch sheets. To make a tissue paper pad for mottling, take three or four sheets, and gather the edges into the center. The gathered side is held in the palm of your hand; the smooth round side is the mottling surface.

THE GROUND COAT of paint on the wall should be a low-sheen enamel of any color. For the glaze, you can use the formula given at the bottom of page 229.

YOU'LL NEED someone to help you apply the glaze. Two ladders and a 6-inch paint brush are also necessary. Your helper starts applying the glaze in an upper corner--brushing a three-



Glazing color stippled with a natural sponge.

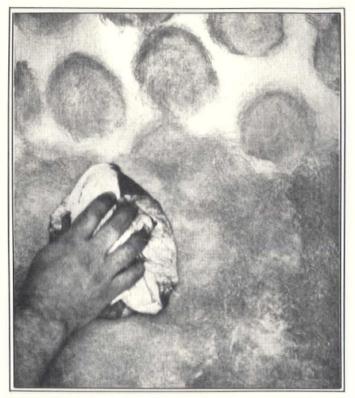
foot-wide swath halfway down the wall. The glaze should be spread as evenly as possible. Next, after moving your helper's ladder into position for the next vertical swath, your helper applies glaze to the bottom of the first section. You should be following as closely as possible, mottling the surface with your pad of tissue paper.

YOUR GOAL is to pounce the wet glaze with the tissue-paper pad before the glaze sets up. The tissue paper leaves a crackled or marbled pattern in the glaze. Don't stop for a rest halfway through, or go back to mottle a missed spot after the glaze has set; it will show. You can avoid repeats in the pattern by rotating the pad in your hand randomly as you work.

AS YOU ARE GLAZING the walls, some glaze is bound to get slopped on woodwork and trim. As soon as you've completed mottling a wall, wipe off any of this excess with a rag dampened with mineral spirits. If it's part of the decorating scheme, these woodwork surfaces may be glazed last.

Stippling

HE SAME GLAZE MIXTURE also works well for stippling. For this finish, ideally you'd use a large stipple brush--but these are hard to find. (Wolf Paints carries two kinds of stipple brushes; see bottom of p. 229 for address.) As substitutes for the real



Tiffany glazing: Spots of various colors have been applied to the wall, and color is being mottled and blended with a wad of cheesecloth.

thing, a window washer's brush, or a clean new dust broom are satisfactory.

WASH the stipple brush with soap and water to make the bristles more flexible. Shake it out, but use it damp. To glaze, use the same system of systematic coating and close follow-up as described for tissue-paper glazing. The glaze is patterned by applying the bristle ends of the dry stipple brush in a pouncing motion.

OR STEEL WOOL striating, the same glaze and teamwork system described above are used. However, in this process the helper should stretch the glaze out farther and drybrush each vertical strip in addition to applying the glaze. Then you use a pad of medium steel wool, drawn over the glaze in vertical strokes, to scratch a striated pattern.

DON'T ATTEMPT to create the striated pattern with long vertical strokes. It's impossible to keep them parallel and plumb, and to avoid the telltale evidence where top is joined to bottom (lapping). The trick is to take short, up-and-down strokes of about six to eight inches. Permit the breaks in the strokes to contribute to the pattern. This overcomes the problem of lapping and also eliminates the need to keep the striations perfectly straight. Variations from the plumb in either direction will balance each other in the overall effect.

THE STEEL WOOL PADS tend to clog with glaze rather quickly, so you'll have to change pads often. You can work with this glaze a little more leisurely because of the mechanical force inherent in the method; even if the glaze starts to set, you'll still get a pattern.

NAT WEINSTEIN is a master decorator specializing in graining, marbleizing, and glazing. His work adorns numerous homes and public buildings not only in his native San Francisco, but also all across the country. For anyone interested in honing his or her skills in painted decoration, Nat also conducts workshops in San Francisco. To obtain information on workshop schedules, call (415) 641-5528. Or write: Restoration Workshop, 489 27th St., San Francisco, CA 94131.

If you'd like to read more about different glazing techniques, consult the colorful pages of "Paint Magic" by Jocasta Innes. Should this 240-pg. hardcover book not be available in your bookstore, use the order form at the back of this issue and request book No. 24.

Living With Glazed Walls

THE FINAL DECISION we had to make in the restoration of our 1883 brownstone was how we would treat walls on the parlor floor. Because the ceilings are so high (13 feet), an unbroken pattern of wallpaper from floor to ceiling would have been too much. And back in 1977 when we were making the decision, the marvelous paper borders, dados, and friezes available again today (Bradbury, Scalamandre, etc.) simply didn't exist. Plain paint, which apparently was the only other alternative, seemed a rather unimaginative use of such large spaces.

WE ENDED UP painting dados and frieze patterns. But for the major portion of the wall between dado and frieze (the "filling"), we decided on a glazed finish. The reasons? Glazing provides more visual interest than flat paint, doesn't show dirt, and is a long-wearing, washable surface.

SEVERAL different painted and glazed colors were chosen for the dining room, hall, and

front parlor. In the dining room, for example, the ground paint was a pale light yellow, with an overglaze of brown (burnt sienna + raw umber) mottled with cotton waste. The pattern in the glaze is very subtle: the final effect resembles golden antique parchment.

BEFORE THE WALLS were painted and glazed, they were covered with canvas and then primed. Canvassing keeps minor plaster cracking from damaging the glazed finish.

THE WORK was done six years ago, and has stood up very well in a household that included three children and numerous pets. Over the years, we've discovered an additional benefit of glazed walls: Minor nicks can be easily touched up with artists' acrylic colors. Because there are already subtle variations in color and pattern, the touch-ups never show!

-- Clem Labine



A Measure of Quality

Garrett Wade Co. offers the most beautiful measuring tape we've seen. The etched and lacquered steel tape winds into a hand-stitched leather and brass case that will only get better with age. People who want to hand tools down to their grandchildren will appreciate the 'Rabone Chesterman' (a suitable name for this very English, very fine tape).

The OHJ staff gave the 20m/66 ft. tape to our former products editor, Joni Monnich, as a going-away present: She's gone to assist well known decorative painter Malcolm Robson. We figured the tape would lend pomp and circumstance to the measuring of walls for estimates. It does make a unique gift.



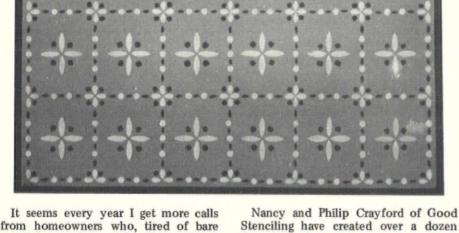
There are 1/8-in. gradations on one edge of the tape, millimeters on the other. The 10m/33 ft. tape goes for \$49.50; the 20m/66 ft. model is \$65.80. We found the tapes in Garrett Wade's 1984 Tool Catalog (\$3.), which is full of practical information and is a thing of beauty in itself. Garrett Wade,161 Ave. of The Americas, Dept. OHJ, New York, NY 10013. (212)807-1155.



Just in the nick of time for Christmas gift-giving: a 1,000-sq.ft. wildflower meadow in a can. Seventeen varieties of wildflower seeds have been 'canned' by the Clyde Robinson Seed Co., who is selling them through Norm Thompson. Plant them any time of year, follow the simple instructions, and you can create a changing meadow of color from spring to fall.

Wildflowers are as hardy as weeds. Consider your neighbor, restoring an old house and still a few years away from landscaping; consider the unsightly lot next door; consider the areas in your own yard that you'd just as soon forget; consider the vacant Victorian house in your neighborhood with grounds that look terrible because the absentee owner is waiting for the value to skyrocket before selling. These are all prime locations for a wildflower meadow. The cost is \$19.95 plus a \$3.50 shipping charge.

For futher details, contact Norm Thompson, PO Box 3999, Dept. RQF-79A, Portland, OR 97208. Or order tollfree (800) 547-1160. Free catalog.

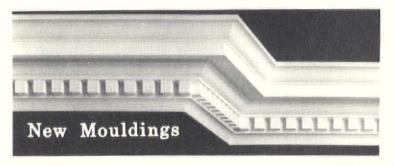


from homeowners who, tired of bare wood-floor upkeep and wall-to-wall carpet, are looking for floor-covering alternatives. One very attractive alternative is a painted floorcloth. Their quality of design, decoration, and materials has greatly increased over the past several years. Not only are they hand-crafted individually, but they take a terrific amount of wear and abuse. Most commonly found in well traveled areas such as halls, dining rooms, and stairways, painted canvas floorcloths have served American homes well from pre-Revolutionary times through the Victorian era. In the early 20th century they were even seen in dining rooms as crumb cloths.

Nancy and Philip Crayford of Good Stenciling have created over a dozen floorcloth designs in styles which are historically accurate reproductions or appropriate adaptations. These painted and varnished floorcloths are suitable for use on floors or as wall hangings. Their most unusual floorcloths are Victorian designs and their marbleized floorcloths entitled 'Squares'.

Nancy and Philip say they'd be happy to guide OHJ readers in the selection of an appropriate floorcloth. Their color catalog is \$2, and samples of the material and colors are available by calling or writing to Good Stenciling, PO Box 387, Dept. OHJ, Dublin, New Hampshire 03444. (603)880-3480.





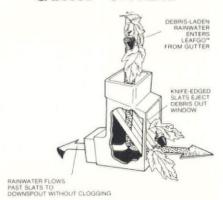
For 1984, Focal Point is introducing the new Williamsburg Collection of five interior comice mouldings and five chair rails. They are copies of those found in Colonial Williamsburg's Governor's Palace, Raleigh Tavern, The George Wythe House, and from Carter's Grove.

Focal Point's products are direct impressions taken from original architectural embellishments. For many projects, these ready-made polymer mouldings and decorations are a cost-effective way to replace missing details. Formerly, such detailing would have called for a skilled plasterer or for replication in wood, using built-up custom millwork. More important than the historical

accuracy of the material is how appropriate the decoration is for the style, period, and size of your house. This new collection from Focal Point gives still another choice to those looking for authentic reproductions. All of these mouldings come primed and ready to paint, and are indistinguishable from plaster or wood once in place. The Williamsburg Collection ranges in price from \$8 to approximately \$25 per linear foot.

A brochure on the new line will be available in early January for \$1; their color catalog is \$3. Order from Focal Point Inc., 2005 Marietta Road, N.W., Atlanta, GA 30318. (404)351-0820.

Gutter Cleaner



For most of us, keeping gutters and downspouts clear of debris means a twice-a-year cleaning expedition up the ladder. 'Leafgo', a novel debris catcher that fits in place of a conventional downspout elbow, is claimed by its maker to make house gutters selfcleaning. With an adaptor, it will fit most metal gutter drop outlets; it fits 'Raingo' vinyl gutter systems directly. Leaves and debris are separated from rainwater as it flows into the opening, where they are ejected through a window in the side. No rainwater is said to escape from the window, and the harder it rains the better it is supposed to work. Made from white vinyl, 'Leafgo' can be painted. It's 'Raingo' part no. RW 208, soon to be available through Raingo dealers nationwide. Its cost will be under \$10. For more information, contact Genova, Inc., Dept. OHJ, 7034 E. Court St., Davison, MI 48423. (313)744-4500.

Historical Bulbs

Following up on the successful introduction of their 'Phoenix' carbon filament light bulb, Bradford Consultants have gone a step further. The 'Phoenix', you may remember, is a reproduction of the early Edison-type carbon loop filament bulb. Now they've added another historic light bulb to the line: The 'Eureka T' features an authentic 'point' on the end, suggesting the original exhausting teat from the early days of lamp manufacture.

The 'Majestic' globe-type carbon bulb, another new addition to their line, is ideally suited to Art Noveau fixtures where the bulb is exposed to view.

New Eureka bulb with 60 watts, zigzag filament, and authentic teat.

The 'Eureka T' is \$6 per bulb, the 'Majestic' is \$5.25. Quantity discounts available. For more information send for a free catalog. Write Bradford Consultants, 16 E. Homestead Ave., Dept. OHJ, Collingswood, NJ 08108. (609) 854-1404.

Round-Top Shutters

Located in an authentic 19th-century millshop in historic Galveston, Island City Woodworking is one of the few millworks producing operable, round-topped, louvered shutters. The firm steadfastly believes that the only suitable material for their exterior shutters is Florida red cypress, long known for weatherability and extended life.



A pair of these round-topped shutters with scrollwork trim, 6 ft.x3 ft., is \$350. The same pair with a flat top will cost \$300 in ready-to-paint condition. Cast-iron hardware for each pair of shutters is about \$10, with latch.

From the company literature:

Wood shutters provide storm and vandalism protection when closed. Louvers can be adjusted for ventilation and light control. Shutters played an interesting part in the social customs of turn-of-thecentury Southern homes. In an era when 'visiting' and paying social calls was a popular pastime, closing one's shutters was an indication that the household was not receiving guests.



The firm also makes screen doors, window units, mouldings, turnings, porch columns, and fretwork. All work is custom and while there is no catalog, they will gladly respond to phone calls or written requests for estimates. Island City Woodworking Co., 1801 Mechanic St., Dept. OHJ, Galveston, TX 77550. (409) 765-5727.



THE LETTER that accompanied the photo above really says it all: "My daughter, Kendall Atchison, took this photograph in Canon City, Colorado, a town filled with charming examples of Victorian architecture. The homes, many small cottages with whimsical towers and gingerbread ornamentation, seem to have escaped

the remuddling craze, at least on the outside. This poor house is a notable exception.

"IT HAS two faults. First, the exterior has been encased in aluminum siding. (Judging from the brick corbelling peeking out at the top, the house probably was brick.) Second, while awnings might have been

appropriate for the house, particularly because of the strong Colorado sun, these ugly aluminum additions have no place on a 19th-century house."

ACCORDING TO Ms. Atchison, her sixteen-year-old daughter exclaimed upon seeing the house, "That's a Remuddling of the Month!"



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Field Guide To Post~Victorian House Styles

Many of us live in houses that, though old, aren't even mentioned in the architectural stylebooks. These anonymous houses make up entire neighborhoods in cities and suburbs across the country. Built from around the turn of the century until the Second World War, they are decidedly not Victorian. We're calling this period—and its buildings—post-Victorian.

Exterior ornamentation of post-Victorian houses is far plainer than that of the Victorians. These simple statements of 'honesty' or nostalgia, full of squarish dignity and good workmanship, have long been dismissed as boring and unattractive white elephants. Fifteen years ago, the same architectural insults were hurled at fancy Victorian houses. We've learned to appreciate the qualities of Victorian buildings; now it's time post-Victorian houses got the recognition they deserve.

Post-Victorian houses can be divided into two major philosophical categories: Romanticism and Utilitarianism. Romantics, or Revivalists, felt that houses should evoke an emotional response based upon associations with historical events. The two major nostalgic revivals were the English and the American Colonial. Utilitarians, however, were reformers who sought to eliminate what they saw as useless decoration, and to focus on that which combined usefulness and beauty. Utilitarian houses were either vernacular descendants of established building forms, or the products of a well articulated philosophy, such as the Craftsman movement.

Following are the major post-Victorian house styles we've isolated. We hope that an appreciation of these house styles will inspire more people to treat their early-20th-century houses with sensitivity and respect.



The Tudor (or Elizabethan) Revival Style is one of the English Revival houses of the Romantic movement. It's typified by half-timbering and one or more massive medieval chimneys. This house often has a slate or tile roof. Its entrance doors are frequently of heavy plank construction, with only a small window — perhaps protected by bars. The pediment over the front door recalls the attempts by designers in Elizabethan England to adapt Renaissance forms to their medieval buildings.



The English Cottage Style is another Romantic English house, one meant to be quaint and charming. Often of stone, stucco, or brick construction, the cottage is dominated by its roofline, which frequently has soft, flowing curves that recall the thatch roofs of the originals in the English countryside. This style often has large expanses of wall space pierced by relatively few windows. The small panes of the windows recall the leaded casements of medieval houses.



The Georgian Revival Style is one of the American Colonial Revival houses of the Romantic movement. The style is marked by its adherence to the symmetry, proportion, and restraint of its 17th-century prototype. This example has the window placement and symmetry of an early Georgian Colonial house. The doorway, with its fanlight and sidelights, is more characteristic of later Federal houses.



The Free Colonial Revival Style, another Romantic, American Colonial Revival house, freely interprets colonial motifs and adapts them to Victorian or post-Victorian house types. This example shows a square, post-Victorian house accommodating such colonial features as a portico, Palladian window, modillions, and pedimented dormers with a roof balustrade.



The Dutch Colonial Revival Style is a third major American Colonial Revival style of the Romantic movement. Its most recognizable feature is the gambrel roof, shown here with a shed dormer, a typical addition. Columns were often placed under the already-hanging, flared eaves of the roof to create a wide front porch. Colonial features, such as the portico, were frequent additions as well.



The Spanish Colonial Revival Style, another Romantic house, has its roots in the 17th-century Spanish colonial buildings of the American Southwest. This house typically has irregular massing, white stucco walls, a low-pitched, red clay tile roof, and round-headed windows and doors. High walls topped by a tile coping, enclosing a garden or patio, are also common.



The Basic Homestead House is Utilitarian, a vernacular descendant of both the 19th-century American farmhouse and the early 1800s Greek Revival "Temple House," with its pedimentlike gable. The body of the house is square or rectangular and is topped by a simple gabled roof. The unselfconscious absence of any "style details" makes it a style unto itself.



The Tri-Gabled Ell is a variation of the basic Homestead House. With this style, the house takes on a simple ell shape, giving the roof three gables instead of two. In many versions, the porch is tucked into the space formed by the two legs of the ell.

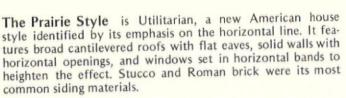


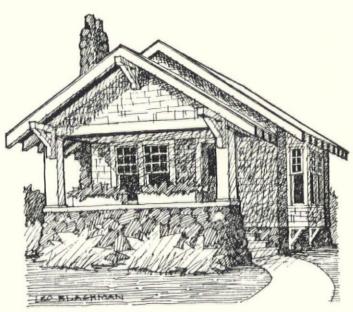
The Princess Anne Style is Utilitarian, a vernacular descendant of an earlier house style — here, the Queen Anne. It keeps the asymmetrical massing, complex roofline, and, in many cases, the large chimneys, all of which are typical of the earlier Queen Anne. Where it differs from its progenitor is in its Utilitarian eschewal of exterior ornamentation.



The American Foursquare, also Utilitarian, is a new American house style. Its boxlike shape and hipped roof provided ample space for America's growing family. This style usually features a dormer in the front of the roof, as well as a porch that extends across the full front of the house.







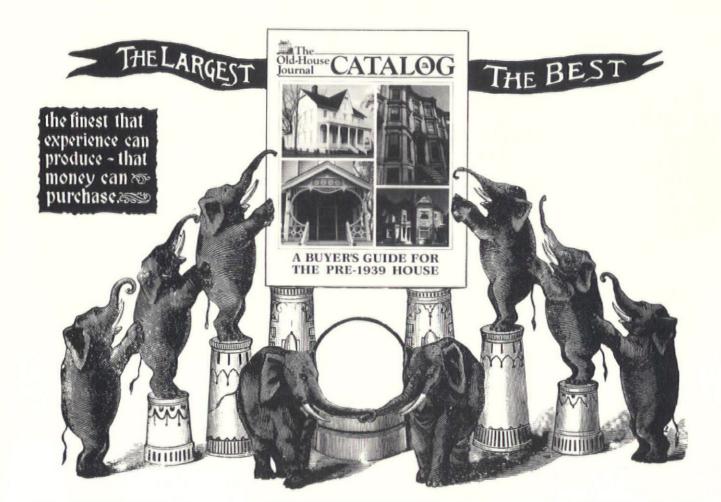
The Bungalow is another Utilitarian, new American house style. This picturesque, one-storey house traditionally features a low overhanging roof and broad porches. The bungalow is adaptable to many influences. This example shows such Craftsman elements as exposed rafter ends, knee braces under the eaves, and natural shingle siding.



The Semi-Bungalow represents a stylistic departure only in its modest second storey. Otherwise, the broad, sloping roof recalls a Swiss chalet, a common bungalow type; the large elephantine columns on the front porch are also characteristic of the style. This example also features the Craftsman knee braces and exposed rafter ends.



The Craftsman Cottage is a Utilitarian, new American house style, the epitome of the philosophy espoused in Gustav Stickley's Craftsman magazine. The exterior elements are simple statements of structure: square columns and balusters on the porch, exposed rafter ends, knee braces. Also essential to these ideals is the use of natural materials, prominent here in the rubble stone foundation.



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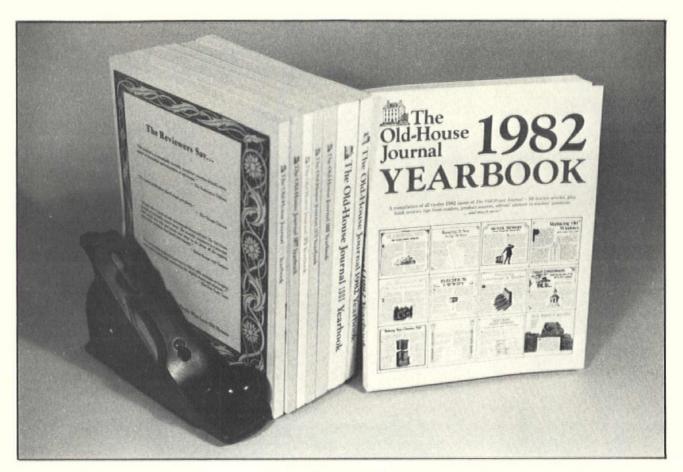
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